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# ***JPRS Report***

# **Environmental Issues**

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# Environmental Issues

JPBS-TEN-93-008

## CONTENTS

25 March 1994

### AFRICA

#### REGIONAL AFFAIRS

Roundup of Environmental Reports 3 February - 17 March .....	1
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### CHINA

Northeast of Country Works To Protect Water Resources .....	3
Journal Says China Leads World in Afforestation .....	3
NPC Delegates View Environmental Challenges Facing Nation .....	4
Afforestation Holds Desert Back in Northern Regions .....	4
Experts Say Mammoth Reservoir To Purify Chang Jiang .....	5
Beijing, Tokyo Sign Environmental Protection Agreement .....	5
NPC To Rename Environmental Protection Committee .....	6
CPPCC Member Sees 'Serious' Geological Resource Shortage .....	6
China Grows Tree Belt Along Coastline .....	7
Chinese Scientists Study Worldwide Dust Movements .....	7
Shanghai Speeds Up Afforestation .....	7
National Program for Water and Soil Conservation Approved .....	8
Guangdong Province To Emphasize Overall Forestry Benefits .....	8
Afforestation in Full Swing in Southern Region .....	8
Canadian Official Clarifies Stand on Seal Product Exports .....	9

### EAST ASIA

#### REGIONAL AFFAIRS

Researchers Find Asian Pollution Affects Western Pacific .....	10
--	----

### JAPAN

'Sources' View Draft for Global Environment Facility .....	10
Government, China Sign Environmental Protection Agreement .....	10
Scientists To Study Shanghai, Bangkok Environments .....	11

### NORTH KOREA

Chongnyon Groups Denounce ROK Nuclear Waste Dumping .....	11
---	----

### PHILIPPINES

Memorandum Signed on Preserving Batangas Environment .....	12
Ramos Reiterates Policy Against Importing Waste .....	12
Government Launches Manila Bay Rehabilitation Program .....	12

### TAIWAN

Taipei Promises To Reduce Carbon Dioxide Emissions .....	13
Taipei Delegates To Speak at CITES Meetings in Geneva .....	13
Taipei Withdraws From CITES Standing Committee Meeting .....	14
Bhutanese Princess Sentenced for Smuggling .....	14
Taipei Releases Draft of Harsh Wildlife Protection Law .....	14
Executive Yuan Approves Wildlife Conservation Law .....	15

Taipei Faces Possible Sanction Over Wildlife Protection .....	15
Revised Wildlife Conservation Law Increases Punishments .....	16
<b>THAILAND</b>	
Proposed Natural Gas Pipeline Said To Raise Concerns .....	16
<b>VIETNAM</b>	
Natural Forest Resources Increase Between 1983-1992 .....	17
<b>EAST EUROPE</b>	
<b>HUNGARY</b>	
Economic Minister Praises Japan, U.S. Environmental Aid .....	18
<b>SLOVAKIA</b>	
Government Discusses Disposal of Radioactive Waste .....	18
<b>LATIN AMERICA</b>	
<b>REGIONAL AFFAIRS</b>	
Southern Cone Environmental Issues Through 9 March .....	19
Tasks of Brazilian-Venezuelan Commission Detailed .....	19
<b>MEXICO</b>	
Environmental Office Closes Companies in Northern Region .....	20
<b>NEAR EAST/SOUTH ASIA</b>	
<b>ALGERIA</b>	
French Cooperation in Fighting Water Pollution .....	22
<b>INDIA</b>	
Vanarai Chief Alerts Rao to Threats to Forests .....	22
Cabinet Lets 50 Polluting Industrial Units 'Off the Hook' .....	22
<b>IRAN</b>	
Agreement Signed To Eliminate CFC Use .....	23
Prosecutor-General Warns Against 'Barbaric' Deforestation .....	23
<b>CENTRAL EURASIA</b>	
<b>RUSSIA</b>	
Russian Greenpeace Says West Dumping Toxic Waste in Russia .....	24
Navy Responds To MAINICHI Report on Nuclear Waste Dumping .....	24
Paper Reports on Submarine Dismantling Plant in Vladivostok .....	24
Fedorov Releases New Book on CW Programs .....	25
Navy Officers Want Japanese Aid for Nuke Waste Facility .....	25
State of Russia's Ecology for 1993 Reviewed .....	26
Statutes on Russian State Environmental Strategy Approved .....	27
Environment Ministry Terms Greenpeace Report 'Disinformation' .....	28
Greenpeace Report Details Toxic Waste Imports From West .....	29

White Book Issued on Moscow Environmental Conditions .....	32
Environment Minister Calls for More German Investment .....	34
Ufa Inhabitants' Health Endangered by Dioxin .....	35
Ecological Adviser Says Chemical Weapons Amount to 40,000 Tons .....	36
Ecologists Condemn Government Appraisal of Nuclear Accident .....	36
Panov Says Further Nuclear Waste Dumping Unnecessary .....	37
Navy Denies Decision Made To Dump Waste in Sea of Japan .....	37
Ecology Panel Chief Hosts News Conference on Environment .....	37
Duma Ecology Committee Chairman Reviews Environmental Priorities .....	37
Scientist Sees Radiation Danger in Areas Considered Safe by IAEA .....	39

## BELARUS

Ecologist Details Work of Research Center .....	41
Waste Burning Facility Said Planned Near Gomel .....	42

## ESTONIA

Paldiski Nuclear Waste To Be Removed Using New Russian Containers .....	42
World Bank Loan for Modernizing Kunda Plant .....	43
Recent Laws Revitalize Environmental Protection Fund .....	43

## TAJIKISTAN

Greenpeace Wants Tajik-Russian Military Exercises Cancelled .....	44
---	----

## UKRAINE

Secret Kravchuk Decree on Nuclear Power Publicized .....	44
Minister Kostenko Wants Russia To Remove 'Poisonous Heptyl' .....	44
Cabinet Decree Regulates Import of Hazardous Waste .....	45

## WEST EUROPE

### REGIONAL AFFAIRS

European Environment Agency Established, Priorities Noted .....	46
---	----

### AUSTRIA

Klestil Discusses Common Regional Concerns .....	46
--	----

### FINLAND

More Effective Environment Regime Seen With EU Membership .....	48
Effect of Saltwater Flow Into Baltic Viewed .....	49
World War II Chemical Weapons Dumped in Baltic Sea .....	51

### FRANCE

Paris To Contribute Fr800 Million To World Environment Fund .....	51
---	----

### GERMANY

Research Minister Views Environmental Research .....	51
Liability Fund for Hazardous Waste Exports Criticized .....	52
New Laender Threatened by Radioactive Uranium Waste .....	52

### NORWAY

Effects of Chernobyl 'Well Into Next Century' .....	52
---	----

**SWEDEN**

Environmental Board Fears Cutbacks After EU Entry ..... 53

**UNITED KINGDOM**

Britain To Review How it Disposes of Nuclear Waste ..... 53  
'Disturbing' Drop in Marine Carbon Dioxide Absorption ..... 54  
Search on for Chernobyl-Affected Sheep ..... 55  
Computer Model To Predict Pollution Path ..... 55

**INTERNATIONAL**

G-7 Countries Hold Two-Day Meeting on Environment ..... 57  
G-7: Environmental Projects Could Create 2 Million Jobs ..... 57

## REGIONAL AFFAIRS

### Roundup of Environmental Reports 3 February - 17 March

AB2003094094

[Editorial Report] The following is a roundup of recent environmental reports monitored from media in FBIS Abidjan Bureau and EAU coverage areas from 3 February to 17 March.

#### Ghana

Accra GHANAIAN TIMES in English reports in its 3 February edition that "The Ministry of Environment and the Greater Accra regional administration" on 2 February "ordered the stone breakers of Achimota Forest area near Accra to cease their operations within 24 hours or face prosecution." This order follows a previous one issued in May asking the stone breakers to move from the area by October and to go to another site at Pokuase but the order was not complied with. Environment Minister Christine Amoako-Nuamah, who gave the order, said the Achimota Forest stone breakers' activities were "causing a serious environmental problem to the people living around the Achimota and Legon areas."

Accra DAILY GRAPHIC in English reports in its 9 February edition that, according to studies conducted by the University of Science and Technology, the River Subin, which flows through Kumasi and its environs, is "almost dead." "High levels of environmental pollution and irresponsible management practices by the Kumasi Metropolitan Authority and communities along the river" threaten the Subin as well as the Kentikrono, Wewe, Susan, and Aboabo Rivers. Mrs. Esi Awuah, environmental biologist at the university, says the oxygen levels in these rivers are depleting to such an extent that they are "gradually losing their ability to contain higher forms of life." Mrs. Awuah stated most industries near Atonsu, where the rivers join together in a valley, "do not have waste treatment plants and poison control units" and therefore discharge "untreated chemicals of a toxic nature" into the confluence. The communities along the river have long practiced the "dumping of night soil" and some have even constructed "places of convenience" directly over the water. Her research has shown that the Subin could restore itself in 32 days "if proper environmental and sanitary measures are adopted."

Accra Ghana Broadcasting Corporation Radio Network in English at 1300 GMT on 3 March reports that the program officer of the Environmental Protection Council, Mr. K. O. Omare, has cautioned that if proper controls and incentive mechanisms are not put in place for industrial development in Ghana, "environmental pollution would assume alarming proportions in the near future." He said efforts so far made toward control or prevention of the adverse effects of industry have been

"largely inadequate." Mr. Omare gave the warning at a symposium organized to mark Environmental Day at the Buy Ghana-Export Ghana '94 Fair in Accra. Our reporter, who was present at the symposium, adds that there is a "growing concern in the country about industrial waste and pollution, health and safety hazards to workers, and public health problems due to adverse environmental changes and the misapplication of hazardous chemicals." A UN Industrial Development Organization study carried out in 1984 on industrial pollution reported that for the zone between Cote d'Ivoire and Benin, including Ghana, industrial pollutants are produced mainly by the textile industry, whose waste contains 30 percent of four polluting substances. Manufacturers of food products contribute 25 percent, while petroleum refining and handling produce 20 percent of industrial waste. Mineral exploitation and processing are also responsible for about 10 percent of the waste.

#### Guinea

Conakry Radiodiffusion Nationale de la Republique de Guinea in French at 0645 GMT on 17 March reports that at its recent session the Council of Ministers decided to stop deforestation and stressed "the need to preserve forest resources as well as state land reserves." It adds that at a time when environmental protection organizations are warning against global warming and stressing the need to preserve trees and forests, Guineans irresponsibly set the country's forests and vegetation on fire. By doing so they leave "the countryside to the mercy of sand, wind, and erosion, in short, desert encroachment." The government has launched a campaign to save these forests and protect the nation's interests. Therefore, as far as the Koukou forest in Kindia is concerned the 1949 demarcation will be respected. People living in the area will be evacuated before 30 March and all land allocations and occupation made within the limits of nonprotected zones and state lands reserves have been declared null and void in all prefectures. As President Lansana Conte recently said: We must preserve our riches. The forest is the source of our great wealth.

#### Nigeria

Lagos Radio Nigeria Network in English at 0600 GMT on 1 March reports that the Edo State administrator, Lieutenant Colonel Muhammed Onuka, has undertaken an inspection tour of the erosion-ravaged areas of Benin-City. At the Iwaseta-Orin road square, the administrator said that if the flood in the area was controlled, the road could serve as a by-pass to the state capital. Col. Onuka directed the state environment task force to produce a comprehensive report on the erosion-devastated areas of the state for necessary action.

#### Tanzania

Dar es Salaam Radio Tanzania External Service in English at 1600 GMT on 15 March reports the government plans "to carry out a study to determine the

number of hotels that can be built in the national parks without threatening wild game and the environment." The prime minister and first vice president, John Malecela, told the president of the International Union for the Conservation of Nature, IUCN, Mr. J. Hare, that the study would cover all the national parks. The prime minister said Tanzania "would welcome foreign assistance in carrying out the study" and the IUCN showed interest in assisting in the study.

Honorable Malecela said poaching was a very serious problem in the national parks as poachers were using increasingly sophisticated weapons. He said the poachers, mostly from war-torn Somalia, were using machine guns and were very ruthless in their methods. He said Tanzania was forced to use its limited resources to deal with this problem. The prime minister said drought in northern Tanzania had seriously affected wild animals and thousands had died. Mr. Hare said the IUCN would open an office in Dar es Salaam.

## Northeast of Country Works To Protect Water Resources

OW1203144994 Beijing XINHUA in English  
1326 GMT 12 Mar 94

### [“Roundup”]

[Text] Changchun, March 12 (XINHUA)—Shoals of fish have returned to the Songhua River in Jilin Province, where the water turned black and aquatic products died out two decades ago due to heavy pollution.

“This is the result of local governments’ efforts to protect the water resources,” said Wang Yongrong, chairman of the Songhua and Liaohe River Valley Water Conservancy Committee under the Ministry of Water Resources.

“Progress has been made in protecting the water resources of the Songhua and Liaohe Rivers, one of China’s seven key water systems, alongside the rapid economic development,” the chairman noted.

China’s water resource volume ranks sixth in the world. However, average consumption per capita in China is only one-fourth the world’s average, falling in 88th place.

Northeast China, where the Songhua and Liaohe Rivers flow, suffers severe shortages of water resources. The average per capita consumption of the surface water is only one-half the country’s average.

Northeast China consists of Heilongjiang, Jilin and Liaoning Provinces and the Inner Mongolia Autonomous Region.

To clean up the pollution and protect the water resources, the central government set up a leading group in charge of the protection of the Songhua River in 1978.

In 1987, the group was expanded from members from Heilongjiang and Jilin Provinces and six ministries to include representatives from northeast China’s provinces and one autonomous region and 12 ministries and commissions under the central government, and its jurisdiction was enlarged to cover both the Songhua and the Liaohe Rivers.

Years of practice have proven such a trans-regional leading organization is effective in cleaning up and controlling pollution and protecting the water resources.

A survey shows that the group has ordered 173 enterprises in the Songhua and Liaohe River valley to clean up and control pollution, involving a sum of 560 million yuan.

By the end of last year, these enterprises had completed 200 projects.

These projects are able to treat 309 million tons of waste water and reduce the discharge of 650,000 tons of pollutants a year into river. They earn 130 million yuan a year through recycling and re-using treated water.

While helping enterprises in the Songhua and Liaoning [as received] River valley to upgrade their technology to cut the discharge of mercury into the rivers, the central government and Heilongjiang and Jilin Provincial governments have allocated special funds to make an epidemiological investigation before working out related regulations and measures to protect the rivers.

According to the regulations, any organization or enterprise that violates the set limit for discharging waste water into the rivers will be fined.

In addition, cities are encouraged to improve their environment and make recycled use of treated waste water.

Liaoning, China’s key industrial province, has launched a “water cleaning project” to protect the water resources, improve the water environment and save industrial-use water.

Governments of Heilongjiang, Liaoning and Jilin Provinces and the Inner Mongolia Autonomous Region are taking joint efforts to monitor the water quality of the Songhua and Liaohe Rivers in winter, when water quality tends to deteriorate.

They also are carrying out international cooperation and exchange in this field.

Officials and experts in environmental protection of northeast China have paid a visit to Japan to learn from the latest achievement and technology in the study and treatment of mercury, and extended cooperation with the United States in treating organic pollution.

They are also striving to gain international cooperation and donations for environmental protection.

Yan Keqiang, deputy minister of water resources, has encouraged people in northeast China to continue their efforts to protect the water resources by saying, “we are determined to harness and protect the Songhua and Liaohe River system and all other major river systems in China.”

## Journal Says China Leads World in Afforestation

OW1603035594 Beijing XINHUA in English  
0321 GMT 16 Mar 94

[Text] Beijing, March 16 (XINHUA)—The people in China have planted a total of 18 billion trees since the early 1950’s, and the man-made afforested area amounts to 33 million ha, making it the world leader in this respect, according to the “CHINA ENVIRONMENT JOURNAL”.

Obvious progress has been made in developing the 6.7-million ha fast-growing tree base, the northern China shelter belt, and the tree belts around the farmlands in the plains areas, on the middle and lower reaches of the Chang Jiang River, along the coastal areas, in the Taihang Mountains and in arid areas.

The professional paper noted that Guangdong, Fujian and Hunan Provinces have taken the lead in covering their barren mountains with trees.

The forestry departments, of which the gross output value rose from 2.52 billion yuan in 1952 to 140 billion yuan last year, offered several billion cu m of timber for national economic development, and expanded the afforested areas by more than 133 million ha.

According to Xu Youfang, minister of forestry, China will raise its tree coverage rate from the present 13.92 percent to 15.3 percent in 1995 and that of cities to 25 percent.

#### NPC Delegates View Environmental Challenges Facing Nation

OW1503101894 Beijing XINHUA in English 0921 GMT 15 Mar 94

[Text] Beijing, March 15 (XINHUA)—China's environmental quality has remained basically unchanged in recent years, though environmental problems has posed a serious challenge to the country, a senior Chinese environmental official said here today.

At a press conference given by the current session of the National People's Congress (NPC), Qu Geping, chairman of the NPC Environmental Protection Committee, said that the country's environmental quality has "basically remained at the same level of the 1980's."

He said that economic losses caused by environmental pollution in China top about 100 billion yuan every year.

Asked about Chinese Government's spendings on environment, he said that China spends 20 billion yuan on environment protection every year, accounting for 0.7 percent of its annual gross national product. The figure leads all other developing countries in the world, he said.

He cited the example of Beijing city, which spends an amount of money that accounts for 2.4 percent of its annual gross domestic product every year. In the past decade, the city has spent over ten billion yuan on projects for curbing pollutions.

He noted that the government imposes very low fines on enterprises which violate environmental protection rules, prompting some enterprises to pay fines in exchange for government consent on their spoiling of environment. The total fines of last year only accounted for 0.11 percent of the country's annual industrial output.

"We have raised the minimum of the fines by one-third last year... and we are going to make it even higher, so as to compel the enterprises to clean up the environment instead of just paying fines," he said.

Asked about the actual figures for cancers and respiratory diseases caused by pollution in China, he said that

China has yet to compile a set of complete figures on the impact of environmental pollution on people's health.

"It is a very complicated job. We are still carrying out researching programs in this regard," he said.

He said that the Chinese Government did not make public to the people the World Bank reports on pollution-related diseases in the country, because it has to consult with relevant departments to "verify the precision of the international figures."

Asked about China taking out gall bile from living bears, Qu said that China's wild life protection policy is to "carefully protect, actively reproduce and rationally utilize" wild animals.

"China has a large number of bears," he said. "On this precondition, we should consider utilizing them for medical purposes."

He said that keeping one bear for medical use will avoid the killing of 220 bears. And the bear will not suffer great pains.

#### Afforestation Holds Desert Back in Northern Regions

OW1403131394 Beijing XINHUA in English 1244 GMT 14 Mar 94

[Text] Yinchuan, March 14 (XINHUA)—A massive afforestation campaign in north, northwest and north-east China (the "three-north" region) has stifled the encroachment of deserts in the region and helped form an economic belt there, official sources said.

Rows of desert-defying forest greenbelts, orchards, newly developed farmland and tourist attractions with a taste of the wild desert have diminished the ferocity of the desert that once dominated the region.

Many of the country's desert areas are scattered over more than 260 counties in 13 provinces, municipalities and autonomous regions in the "three-north" region, which has plus-1.9 billion mu (about 12.7 million ha [hectare]) of desert and desertified land.

The lingering desert problem, compounded by the arid climate, frequent wind storms and a vicious cycle of escalating wind and desert, has harmed farmland, devoured pastureland, buried houses, disrupted transportation and overall severely affected the lives and production of some 35 million local people.

Since a comprehensive "three-north" afforestation campaign was launched 15 years ago, more than 70 million mu (4.67 million ha) of desert land has been planted with various species of trees, in addition to afforestation of 56 million mu (3.73 million ha) of enclosed desert land and aerial seeding of some 7.5 million mu (500,000 ha) of land.

The figures have combined to help raise the region's total area with tree cover to over 200 million mu (13.3 million ha).

So far some 12 percent of the "three-north" desertified land has been improved and around 20 million mu (1.33 million ha) of farmland has been developed in the former deserts.

In the region's 164 million mu (around 11 million ha) of farmland whose yields were perennially poor and unstable because of storms and the advance of the desert, grain output has been hiked by 10 to 30 percent.

And grass output in the 134 million mu (8.93 million ha) of pastoral land threatened by desertification and salinization has increased by more than 20 percent.

The green drive has meanwhile spurred the local forestry and fruit tree planting industries. The region's commercial orchards now produce more than six billion kg of fresh and dried fruits annually, bringing in an additional six billion yuan (about 690 million U.S. dollars) in output value.

In Inner Mongolia's Chifeng city and Jirem League, both open to the unbridled assault of desert storms in the past, a seven-million- mu-sized production base for mountain almonds has been established, yielding six million kg of such almonds a year. The output of apples and pears in the specialized production base in Bayannur League is 10 million kg annually, and the Wuhai Grape Production Center produces five million kg a year.

North China's Shaanxi Province has set up a six-million-mu willow production and processing zone, which annually earns more than 20 million yuan (2.3 million U.S. dollars) in profits and 2.8 million U.S. dollars in foreign exchange.

Officials said that the planting of commercial forests has become one of the mainstay industries in the local economy.

They said that the forest belts, reservoirs and newly-built houses on the most extreme frontiers of deserts have marked the turning point of man's fight against deserts.

In Yulin of Shaanxi Province, four desert forest belts add up to 1,500 km in length, covering an area of 1.8 million mu (120,000 ha). The belts have effectively halted desert expansion, officials said.

Neighboring Gansu Province has so far improved and afforested some five million mu (333,000 ha) of desertified land as well as protected 4.7 million mu (310,000 ha) of farmland and orchards from the intrusion of desert and 1,400 villages from being swallowed up by drifting sands. The arid area has now emerged as a major grain producer in north China.

Northeast China's Jilin Province has planted eight million mu (530,000 ha) of trees and claimed a total of four

million mu (367,000 ha) of farmland from the desert. The province has virtually controlled the spreading of deserts, officials said.

North China's Ningxia Hui Autonomous Region has considered the exploration of desertified land and sand mountains as a major source to increase farmers' income.

The successful experiences of the "three-north" region of China in containing desert expansion and improving desertified land has caught attention worldwide. Officials and experts from more than 40 countries, regions and the United Nations have inspected the afforestation project in China's "three-north" region.

#### Experts Say Mammoth Reservoir To Purify Chang Jiang

OW1403083094 Beijing XINHUA in English 0751 GMT  
14 Mar 94

[Text] Yichang, March 14 (XINHUA)—The mammoth three gorges reservoir project now being undertaken on the upper reaches of the Chang Jiang will help improve the water quality in the middle and lower reaches, according to environmentalists.

When the retained water is discharged from the reservoir in the dry seasons the extra flow will wash pollutants downstream.

Experts on water resources protection came to this conclusion after three years of on-the-spot investigation.

They said the effect is apparent in the section from the reservoir site near Yichang to Wuhan, the capital of central China's Hubei Province.

They started the research in 1990 in four selected sections along the Chang Jiang, focusing on water quality changes with water level fluctuations.

The reservoir, expected to be built over the next 15 years, will have a normal water level of 175 m [meters] and a total storage capacity of 39.3 billion cu [cubic] m.

#### Beijing, Tokyo Sign Environmental Protection Agreement

OW2003102994 Beijing XINHUA in English 1006 GMT  
20 Mar 94

[Text] Beijing, March 20 (XINHUA)—An agreement on environmental protection between the Chinese and Japanese Governments was signed here today.

Chinese Premier Li Peng and Japanese Prime Minister Morihiro Hosokawa attended the signing ceremony after their two-hour talks.

Signing of the accord marks that a successful Sino-Japanese cooperation on environmental protection over the past decade has made another step forward.

Xie Zhenhua, head of the Chinese State Bureau of Environment Protection, and Michihiko Kunihiro, Japanese ambassador to China, signed the agreement on behalf of their respective governments.

According to Xie, China and Japan started cooperation in environmental protection as early as in the 1980's. Since then, frequent visits, joint research, personnel training, joint scientific and technical projects have been going on between Chinese and Japanese technicians and environmental managers.

According to an exchange of notes between the two governments in 1991, Japan donated 10.2 billion Japanese yen to China to set up a Sino-Japanese friendship environmental protection center in Beijing which is under smooth construction and due to be completed by the end of 1995.

Between 1992 and 1993, with the aid of the Japanese Government, the two countries carried out an investigation of the water pollution in Boyang Lake in east China and a purification program, which has achieved satisfactory results.

During the past few years, China and Japan also stepped up cooperation in regional environmental protection such as in northeast Asia and northwest Pacific ocean.

According to the new agreement signed today, the two countries will cooperate in the fields of prevention and control of air pollution, acid rain, water pollution and the disposing of harmful wasted gases, research in the impact of pollution to human health, improvement of urban environment, protection of ozonosphere, and protection of natural ecological environment and biological varieties.

The two sides will strengthen the exchanges of scientists and technical personnel and of technical information and data concerning research and development of environmental protection.

#### NPC To Rename Environmental Protection Committee

OW1903041894 Beijing XINHUA in English 0324 GMT 19 Mar 94

[Text] Beijing, March 19 (XINHUA)—The Environmental Protection Committee of the National People's Congress (NPC), China's parliament, will be renamed the Environmental and Resources Protection Committee of the NPC.

The Third Meeting of the Presidium of the Second Session of the Eighth NPC today adopted a bill on changing the name of the committee submitted by the NPC Environmental Protection Committee, and a draft decision on the bill submitted by the secretariat of the session.

Both the bill and the draft decision will be submitted to NPC delegations for deliberation.

In the bill, the environmental protection committee said that, since its establishment, many government departments and people have regarded it as being engaged primarily in environmental protection, thus paying little attention to the committee's work aimed at protecting natural resources.

The bill says China now faces serious problems in terms of natural resources, including shortages of water resources, insufficient farmland resources, vegetation damage, soil erosion, desertification and a decrease in the number of wildlife.

The bill describes the damage and waste of resources as a major factor causing environmental pollution.

That is why it is necessary to combine legislation and supervision in the field of resources protection with those in the field of pollution control to make sure that the Environmental Protection Committee will be able to better perform its duties and functions, the bill says.

#### CPPCC Member Sees 'Serious' Geological Resource Shortage

HK1803151394 Beijing ZHONGGUO XINWEN SHE in English 1156 GMT 18 Mar 94

[Text] Beijing, March 18 (CNS)—Member of the CPPCC and associate researcher of the Chinese Academy of Geological Sciences Mr. Wang Mili said today that a grim situation was facing the Chinese geological sector as a result of a shortage of geological resources and investment as well as a draining of talented people from this field.

Mr. Wang said that the serious shortage of investment in geological prospecting had resulted in known mineral deposits not being able to meet the country's needs. Of 45 proven main mineral resources, 12 will be in short supply within this century and half of the 45 mineral deposits will not keep pace with the demands of economic development in the 21st century.

Meanwhile, investment in mineral production was falling, taking inflation into account, by 10.3 percent annually, resulting in a half-closure of one-third of geological prospecting teams, with their salaries and living standard falling to below the average level in the country. Four such teams in Guangdong which had made a great contribution to geological work were living in poverty, and similar workers in Qinghai Province working on the plateau area for dozens of years where oxygen is thin continued to live in bad housing conditions, with their children unable to find work and 175 households, of whom had a per capita income for their daily expenses of less than RMB 35 [renminbi] monthly. [sentence as received] Such situations had caused many talented people to move out of the sector.

The mismanagement of mineral deposits was serious resulting in environmental pollution, and the safety of workers and public order had also been affected.

Mr. Wang called for more attention to be given to geological work to meet the needs of China's economic development. The caring for the country's natural resources should, like the control of population and protection of the ecology, be seen as a fundamental national policy.

### China Grows Tree Belt Along Coastline

OW1803062294 Beijing XINHUA in English 0607 GMT  
18 Mar 94

[Text] Beijing, March 18 (XINHUA)—The Chinese people are planting a tree belt along their 18,000-km coastline, according to the "China Environment Journal".

Work began in 1988, and the tree belt has extended 14,000 km so far and covered two million ha.

The professional paper noted that Fujian and Hainan Provinces and Qingdao city in Shandong Province have taken the lead in the work.

Fujian planted a 3,100-km-long tree belt along its coast and around nearby farmland last year.

Hainan now has a 1,400-km-long tree belt along its 1,500-km coast.

Qingdao has vowed to cover its remaining 15 km of coast with trees this year.

The paper noted that the construction of the "green wall" in the coastal areas has effectively weakened typhoons, tidal waves and rainstorms, protected stretches of farmland and improved ecological conditions.

### Chinese Scientists Study Worldwide Dust Movements

OW1703050194 Beijing XINHUA in English 0435 GMT  
17 Mar 94

[Text] Lanzhou, March 17 (XINHUA)—Sand from the Tarim Basin in the heart of the Asian Continent can easily drift as far as the Hawaiian Islands and the mid-Pacific, just with the help of the wind.

Sand from the Sahara Desert in Africa can drift over the Mediterranean Sea to reach the European Continent and even North America.

These findings were made by Chinese scientists using oxygen isotopic comparison and analyzing sediments from the Hawaiian Islands and the Pacific Ocean floor. They said that they had discovered that most of the quartz particles on the ocean floor were dust particles from the heartland of Asia.

About five percent of the earth's land mass is covered by accumulations of flying and drifting dust. In the world's arid areas, 20 percent of which are covered by drifting sand, over 90 percent of the fine sandy soil is carried

away by air movements every year. And about 10 tons to 240 tons of sandy soil per sq km of land is transported afar every year.

Sandy dust from a windstorm in North China last year reached the Korean Peninsula and Japan.

Experts from meteorology departments and the Lanzhou Desert Institute of the Chinese Academy of Sciences have concluded that chronic aridity, high temperatures, the mutual impact of warm and cold air currents and the alternation of high and low pressure troughs can produce gales, which, once they enter areas with severe wind erosion of the earth's surface, can cause damaging sand storms.

According to researcher Liu Xianwan, wind tempo has a bearing on the movement of sandy dust.

He Shiliang, another researcher, said that sandy dust starts moving when the wind tempo is about four to five m [meters] a second. The bigger the wind, the quicker the dust moves and the more dust the wind carries away.

Scientists have warned that sand storms, which have over the past few years become more frequent, may have a significantly negative impact on the radiation of solar energy as well as on the thermal balance of the earth and the universal climate.

They suggested that the most effective way to curb drifting dust is to plant and safeguard grass and trees, stop over-exploitation of the land and eliminate industrial pollution sources.

### Shanghai Speeds Up Afforestation

OW0903032794 Beijing XINHUA in English 0306 GMT  
9 Mar 94

[Text] Shanghai, March 9 (XINHUA)—The municipal government of this, China's largest economic center has designated 1994 as a "Year for Greening".

It is mobilizing all its residents to "develop Shanghai into a clean, beautiful and comfortable ecological city."

According to the plan, the government will build or expand four parks and complete a number of greening projects to expand the public green areas by 133 ha, and plant a 500-meter-wide tree belt around the city this year.

Shanghai has made progress in beautifying its urban area over the past few years.

Last year saw the city add 157.54 ha of green areas and four parks, and plant 10.23 million trees. The city now averages 1.15 sq m of green area per capita.

The city's green coverage rate reached 13.5 percent of its urban area last year.

**National Program for Water and Soil Conservation Approved**

HK1003103394 Beijing RENMIN RIBAO in Chinese  
7 Mar 94 p 2

[Report by Guo Yunling (6753 0336 5376): "State Council Gives Written Reply to the 'National Program for Water and Soil Reservation'"]

[Text] Recently the State Council gave an official, written reply to the "National Program for Water and Soil Conservation," agreeing in principle to carry out the water and soil conservation work in accordance with the second proposition. This means that China now has a fundamental basis to go by in carrying out the work.

Soil erosion in China, which is enormous in magnitude and covers vast tracks of territory, has inflicted great harm on the country. It has brought about long-term low yields and poverty to localities, and even is endangering the subsistence of the masses of people in some localities. Moreover, the running down of silt in large quantities has caused floods and waterlogging along the lower reaches of rivers. To work out this national program for water and soil conservation, the Ministry of Water Resources organized national forces to conduct large amounts of investigation and study, scientific experiments, and observation analyses.

In its reply, the State Council stressed: To do a good job in water and soil conservation has a bearing on economic and social development and on ecological environmental improvement, and helps China shake off poverty and gain prosperity. It also has a bearing on the development and harnessing of rivers and lakes, as well as on the state's construction in the energy, railway, communications, and mining industries, and other areas of endeavor. It is a basic national policy that will yield success in our time and will bring benefits throughout the ages. Therefore, we should uphold it for a long time. The reply pointed out: Water and soil conservation is a systems engineering undertaking. It must adhere to the principle of "prevention as the key factor, overall planning, comprehensive prevention and control, suiting measures to local conditions, and stressing better management and efficiency." Effective efforts should be made to ensure the prevention, protection, and supervision of soil erosion, and to ensure law enforcement work. The policy should be implemented whereby those who harness rivers and lakes and those who manage and protect them will reap the benefits therefrom. While devoting our primary efforts toward bringing the Huang He and the Chang Jiang under control, we also should pay close attention to checking soil erosion in other rivers and to the water and soil conservation work in the key soil erosion prevention and protection areas, supervision areas, and control areas at all levels.

The "National Program for Water and Soil Conservation" puts forward two propositions on soil erosion control, of which the second one suggests a more rapid pace of control. The State Council's reply agreed in

principle to carry out the water and soil conservation work in accordance with the second proposition.

**Guangdong Province To Emphasize Overall Forestry Benefits**

OW1003073994 Beijing XINHUA in English 0725 GMT  
10 Mar 94

[Text] Guangzhou, March 10 (XINHUA)—Guangdong Province, south China, will place more emphasis on improving its forestry ecology in the coming years, government sources said.

During the past eight years, almost all the previously barren hills in the province have been covered with green, two years ahead of the provincial government's "ten-year greening schedule" initiated in 1985.

In the new effort the province plans to plant some 3.33 million ha [hectare] of ecological woods, which will serve purposes such as water and soil conservation, coastal windbreaking, nature reserves and forest tourism.

The necessary funds will be mainly set aside in the budget plan of governments at various levels, but the project will also receive money from the state and the general public.

Meanwhile, the provincial government has called on local authorities to plant more fast-growing trees, exert more efforts in processing forestry products and tap forestry tourism resources.

**Afforestation in Full Swing in Southern Region**

OW1003073794 Beijing XINHUA in English 0649 GMT  
10 Mar 94

[Text] Beijing, March 10 (XINHUA)—Afforestation is in full swing across southern China.

According to the latest statistics, Jiangsu, Zhejiang, Anhui, Jiangxi, Hubei, Hunan, Sichuan and Guizhou provinces and the Guangxi Zhuang Autonomous Region had planted trees on 902,000 ha by the end of February, fulfilling their annual afforestation plan by 43.8 percent.

The Anhui Provincial Government held a mobilization meeting attended by local leading officials and afforestation bureau chiefs as early as on January 1 to draw up a plan for afforesting all barren hills within this year.

Leading officials of Guangxi and Zhejiang took the lead in planting trees earlier this year.

The local governments of 23 counties in Hubei Province organized 1.978 million laborers to plant trees on hills and mountains soon after the spring festival, the traditional Chinese new year, which fell on February 10.

Meanwhile, Hunan Province has planted trees on 93,000 ha in the Chang Jiang River valley so far.

**Canadian Official Clarifies Stand on Seal Product Exports**

*OW1003073694 Beijing XINHUA in English 0651 GMT  
10 Mar 94*

[Text] Beijing, March 10 (XINHUA)—Ercel J. Baker, Canadian assistant deputy minister of fisheries, has written to Chinese Ambassador to Canada Zhang Yijun making clear the Canadian Government's stand on the export of seal products to China.

Recently, an international animal rights organization accused China's Shanghai Fisheries General Corporation of violating the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) by importing 50,000 dead seals from Canada's Newfoundland and Labrador Province to make aphrodisiacs out of sex organs severed from male seals.

Some Western countries' newspapers gave this accusation a lot of coverage. Some congressmen of a certain country even proposed a bill to attack China on the issue.

Baker said in the letter: "I am writing to express the support of the Government of Canada, and to seek the support of your government for the joint venture between Terra Nova Fishery Co. Ltd. (TNF) and the Shanghai Fisheries General Corporation (SFGC) to produce seal products for export to China. The government of the province of Newfoundland and Labrador also strongly supports the project.

"We share the concern of your government regarding the unfounded allegations that seals will be harvested for the sole purpose of using the male sex organs to make sexual stimulants.

"It has been common practice for the more extreme groups (campaigning against seal hunting) to make sensational allegations to stir up controversy and attract media attention."

The letter pointed out that the proposed venture is fully consistent with Canada's commitment to the conservation and rational management of marine resources based on the principle of sustainable development.

There is a long-established commercial seal hunt in Canada which is closely regulated, the letter said.

Canada encourages full use of harvested seals and would oppose any project to kill seals only for a small part of the animal, the letter went on.

The joint venture involves the harvesting and use of the whole seal, the letter noted. It conforms to the licensing requirements and regulations of the Governments of Canada and the Province of Newfoundland and Labrador. Equally, it is fully in accord with international conservation requirements.

Baker emphasized that the harp seal is not regulated by the convention because it is not endangered or threatened, and therefore no CITES permit would be required for export of harp seal products from Canada.

At the end of the letter, Baker said he hoped that the Chinese Government would consider this project favorably and approve the joint venture.

## REGIONAL AFFAIRS

### Researchers Find Asian Pollution Affects Western Pacific

OW1503032794 Tokyo KYODO in English 0253 GMT  
15 Mar 94

[Text] Nagoya, March 15 KYODO—Nitrogen oxides and ozone from the Asian Continent are contributing to air pollution over the western Pacific, researchers at Nagoya University said Tuesday [15 March].

The researchers, led by Yutaka Kondo, professor at the university's solar-terrestrial environmental laboratory, used data from the U.S. National Aeronautics and Space Administration (NASA) survey of chemical substances in the atmosphere.

The pollutants are carried from the Asian mainland to the Pacific by prevailing westerly winds, the researchers said.

Low-altitude ozone results from a chemical change in atmospheric oxygen, with nitrogen oxides from automobile exhausts and coal-fired power stations serving as catalysts.

Unlike stratospheric ozone, such low-altitude ozone can damage the respiratory system when in high densities.

The density of ozone in clean air is normally about 20 parts per billion (PPB) and that of nitrogen oxide is around 0.1 PPB.

But at altitudes of 2,000 to 3000 meters off the coasts near Taiwan and Hong Kong, ozone densities were more than 100 PPB, and off Japan, nitrogen oxide densities were 1 PPB.

A member of the research team, Hideaki Nakajima, said the pollutants detected are responsible for acid rain and could eventually cause forests near the Pacific to die off unless countries in the region quickly produce a preventive strategy.

China and Russia, with their relatively low environmental standards, have previously been identified as responsible for much of the pollution in the region, but this is the first empirical evidence to back up the claims.

## JAPAN

### 'Sources' View Draft for Global Environment Facility

OW1203111094 Tokyo KYODO in English 1028 GMT  
12 Mar 94

[Text] Tokyo, March 12 KYODO—Draft proposals for the restructuring of the Global Environment Facility (GEF) urge the facility to avoid wasting money by setting up a 30-nation body to oversee the funding and carrying out of projects, government sources said Saturday [12 March].

The draft notes that in some cases funds may have been wasted because the opinions of developing countries were not fully taken into account when funds were distributed.

It says membership of the assessment body should reflect opinion among all countries concerned, including developing ones.

Japan contributes funds to the GEF and the sources said the government is likely to accept most of the provisions of the draft.

The GEF began operations in 1990 to provide grants for assisting developing countries to protect the global environment, including combating global warming and pollution of international waters, and for transferring environmentally benign technology.

Responsibility for implementing the GEF is shared by the United Nations Development Program, the UN Environment Program and the World Bank.

But many developing countries have criticized GEF operations, prompting agreement at the 1992 Earth Summit in Rio de Janeiro that it be restructured.

Participating countries have also agreed that the facility's current total funding of 800 million dollars be increased to 2 billion dollars.

The draft suggests that the voting system also take into account developing countries' wishes with a dual vote system consisting of a "one country-one vote" system combined with a second-round vote, with votes weighted depending on the amount of funds contributed.

The final draft will be debated at a March 14-16 meeting of countries concerned in Geneva.

### Government, China Sign Environmental Protection Agreement

OW2003050694 Tokyo KYODO in English 0416 GMT  
20 Mar 94

[Text] Beijing, March 20 KYODO—Japan and China signed a treaty Sunday [20 March] to promote bilateral cooperation on environmental preservation, Japanese officials said.

Japanese Ambassador to China Michihiko Kunihiro and Zie Zhenhua, director of China's State Environmental Protection Bureau, signed the treaty, while Japanese Prime Minister Morihiro Hosokawa and Chinese Premier Li Peng attended the signing ceremony.

Under the treaty, Japan and China will boost exchanges between experts and exchange information to prevent acid rain, water and air pollution and disposal of noxious waste.

The two nations will also hold joint seminars and meetings to discuss cooperation.

The two sides will set up a joint committee to review the bilateral cooperation once a year.

China relies on coal-fired power stations for more than 70 percent of its electricity. Burning of coal releases large amounts of sulfur dioxide believed to cause acid rain.

The treaty will be good for two years.

#### Scientists To Study Shanghai, Bangkok Environments

OW0903063594 Tokyo KYODO in English 0613 GMT  
9 Mar 94

[Text] Tokyo, March 9 KYODO—Shanghai and Bangkok will be the subject of a three-year study by a group of Japanese scientists to help curb environmental destruction in the face of Asia's rapidly expanding population, officials of the Health and Welfare Ministry said Wednesday [9 March].

The study will be launched later this year and will focus on the impact of urbanization and population growth on consumption of energy, a main source of emissions of carbon dioxide and other greenhouse gases believed to cause global warming, the officials said.

Scientists say the change in climate could ultimately turn entire regions into deserts.

The team of scientists from the ministry's Institute of Population Problems and Institute of Public Health hope to improve long-term forecasts for greenhouse gas emissions in Asia by examining the causes of population growth and the impact of rural migration to cities, they said.

The group will also look at how global warming affects the spread of malaria, they said.

The results of the study will be used to draw up population and energy conservation policies that could help reduce the impact of global warming.

The Environment Agency will incorporate the findings in its "Eco-Asia 21 Plan" and will try to enlist support from other Asian countries, the officials said.

World population is expected to increase to 6.3 billion by the turn of the century from 5.3 billion in 1990. According to United Nations population fund forecasts, it will further swell to 8.5 billion in 2025, with more than half of the growth occurring in Asia, mainly China and India.

Rural migration is likely to continue, raising the portion of people living in Asian cities from 30 percent of total population to over 50 percent in 2020.

The National Institute for Environmental Studies estimates that Asia's energy consumption will show annual growth rates of 3.2 percent, far outstripping the world average of 1.6 percent.

#### NORTH KOREA

##### Chongnyon Groups Denounce ROK Nuclear Waste Dumping

SK1703110994 Pyongyang KCNA in English 1028 GMT  
17 Mar 94

[Text] Tokyo, March 15 (KNS-KCNA) [dateline as received]—The leading officials of organisations under the General Association of Korean Residents in Japan (Chongnyon) released statements denouncing criminal dumping of nuclear waste by the South Korean authorities.

Om Chang-pom, chief director of the Federation of Korean Traders and Industrialists in Japan, charged that the Kim Yong-sam clique which has dumped radioactive substances into the sea, ignoring the international convention totally banning it, is, indeed, a group of savages who have no idea of the nation and international law.

He urged the Kim Yong-sam clique to immediately stop seeking confrontation and division in conspiracy with outside forces, scrap the "National Security Law," an anti-reunification law, and open to the public the amount of the nuclear waste they have already dumped into the sea, its kinds and the dumping places and apologize to the nation.

The chairman of the League of Korean Youth in Japan, Pak Ku-ho, said that the grave anti-national, anti-human criminal act committed by the Kim Yong-sam puppet clique is directly linked with the nuclear weapon development that has been promoted in secrecy and has already reached a dangerous stage in South Korea.

"The purpose sought by the Kim Yong-sam group in its malicious anti-DPRK smear campaign over the fictitious 'nuclear issue of the North' is to divert the attention of the people at home and abroad to the North and then hasten its nuclear weapon development," he emphasized.

So Cha-yon, chairwoman of the Democratic Union of Korean Women in Japan, Pak Yong-kon, chairman of the Association of Korean Social Scientists in Japan, and Kim Chong-su, chairman of the Association of Koreans in Japan for Peaceful Reunification, also denounced the nuclear waste dumping by the Kim Yong-sam group as a towering crime against the nation and mankind.

## PHILIPPINES

**Memorandum Signed on Preserving Batangas Environment**

*BK1603080094 Manila MANILA BULLETIN  
in English 14 Mar 94 p S-19*

[Report by Emily R. Pena]

[Text] The Batangas Coastal Resources Management Foundation (BCRMF) signed recently a memorandum of understanding to preserve the Batangas environment.

Batangas Governor Vicente A. Mayo, BCRMF chairman, said the agreement seeks to make the province an environmental-friendly zone by organizing a movement that will reorient the values and practices of the community for the sustainable development of the area.

The movement, called "Kilos Kabayan para sa Kalikasan [Citizens Movement for the Environment]," brings together government and the private sector in a cooperative effort.

To encourage the development of comprehensive environment preservation and management plans, the movement, with the help of Lifewatch Communication Services, has lined up various environmental activities in which the community can participate to bring about an eventual practice in waste management.

"We realize that Batangas is faced with immense challenges stemming from accelerated socio-economic progress envisioned in the Calabarzon [Cavite-Laguna-Batangas-Rizal-Quezon] national development program," Mayo said. The Batangas governor urged his constituents to act together in preserving the future of Batangas.

"Rising population in the coastal area has increased expectations of improved livelihood, health, education communication, and other social services making us realize that we must act as one if we are to preserve our future," he said.

The foundation members are Pilipinas Shell, Caltex Philippines, Chemphil-LMG, Keppel Philippines, Engineering Equipment, General Milling Corp., Purefoods Corp., Union Carbide Philippines, United Coconut Chemicals, AG & P, and Mabuhay Vinyl Corp., which hope to enhance and promote sustainable development of the Batangas coastal resources.

Signatories to the memo of understanding include representatives of the governments of Batangas City, Bauan, San Pascual, and Mabini, the Department of Environment and Natural Resources (DENR), Department of Education, Culture, and Sports (DECS), Philippine Coast Guard (PCG), Philippine Ports Authority (PPA), and the Philippine National Police (PNP).

**Ramos Reiterates Policy Against Importing Waste**  
*BK1703054094 Quezon City Radio Filipinas in English  
0230 GMT 17 Mar 94*

[Text] President Fidel V. Ramos on Wednesday [16 March] directed the Department of Environment and Natural Resources [DENR] and the Bureau of Customs to strictly implement the government's policy prohibiting the entry or importation of wastes, whether toxic or safe. President Ramos specifically ordered the Bureau of Customs to send back immediately to their countries of origin all shipments of imported wastes. At the same time he ordered the Bureau of Customs to strengthen its surveillance and inspection system and to monitor and check all incoming cargoes to see if they carry waste materials.

The directives are issued on the heels of the arrival over this month from Australia, the shipment of electronic metal scrap consigned to a local firm.

The government's policy prohibiting the importation of all kinds of wastes, whether toxic or safe, is contained in the approved integrated national solid waste management system framework, which provides that no technologies shall be allowed that will require the importation of wastes of any kind, whether toxic or safe. This policy is in consonance with Republic Act No. 6969, which provides that it is state policy to prohibit the entry, even in transit, of hazardous and nuclear waste and their disposal into the Philippine territory.

Initial investigation by the DENR of the cargo from Australia carried aboard the MV Tsadasa GIW revealed that the cargo contained used mixed electronic memory scrap, as indicated in the cargo manifest.

**Government Launches Manila Bay Rehabilitation Program**

*BK0903082594 Manila MANILA BULLETIN  
in English 5 Mar 94 pp 1, 6*

[Report by Elena L. Aben]

[Text] The Department of Environment and Natural Resources (DENR), and the Metro Manila Authority (MMA) yesterday launched a program aimed at rehabilitating the diminishing marine resources of the Manila Bay, once considered among the richest fishing grounds in the world.

DENR Secretary Angel Alcala, Quezon City Mayor and MMA Chairman Ismael Mathay Jr., and Las Pinas Mayor Gabriel Casimiro led national and local officials in signing a covenant to support the Coastal Environment Program (CEP).

The project, which cover the 24-kilometer coast from Las Pinas to Navotas was launched at the Santo Nino [Holy Child] Island off the Coastal Road.

The covenant noted the degradation of the natural resources at the Manila Bay, covering an area of about 180,000 hectares bounded by several coastal towns.

The area was also covered with lush vegetation of mangrove species, including the "nilad," where the City of Manila derived its name.

The covenant, however, stated that all major rivers leading to the Manila Bay, as well as its tributaries, are now heavily polluted and considered biologically dead.

Among the major rivers leading to the bay are the Pasig River, Tullahan-Tenejeros River, and Paranaque-Zapote River.

It also noted that garbage and refuse dumped by residents along these waterways and careless disposal of industrial wastes; and poor sewage treatment of industries contribute to water pollution in the area.

The covenant likewise stated that the water pollution is aggravated by oil spills from gas stations, oil depots, barges, tankers, and several ships which also discharge their wastes into the bay.

The DENR-National Capital Region (NCR), in an effort to put a stop to the further degradation of the bay, will extend assistance and other resources needed to the effective carrying out of activities that will protect and enhance the coastal environment of the Manila Bay.

Alcala said that talisay, dapdap, agoho [local plant species], coconut and other trees will be planted to add to the biodiversity of the area surrounding the Manila Bay.

"We will ring the coastline with mangroves," Alcala, an environmentalist and marine biologist, said.

Mathay, for his part, said that the program has to be sustained because of the rapid development not only in Metro Manila but also in nearby regions that bound Manila Bay.

Carlos C. Tomboc, DENR-NCR executive director said the program will aim to plant trees that will attract wildlife resources like bats, birds, and butterflies.

Several Metro Manila residents, according to Mathay, do not recognize or have not yet seen the species of trees that they will plant.

He said the long term goal of the program will be to establish a mangrove seashore park where wildlife species can survive and which will be called the "biodiversity center" of Metro Manila.

## EAST ASIA

## TAIWAN

### Taipei Promises To Reduce Carbon Dioxide Emissions

OW103081094 Taipei CNA in English 0756 GMT  
21 Mar 94

[Report by Lilian Wu]

[Text] Taipei, March 21 (CNA)—Taiwan will observe the regulations laid down by the Framework Convention on Climate Change (FCCC), the Environmental Protection Administration (EPA) said Monday [21 March].

The FCCC, promoted by the United Nations as an environmental protection measure and based on conclusions reached during the 1992 earth summit, went into effect Monday.

Under the FCCC, emissions of carbon dioxide and other "greenhouse" gases are to be limited to their 1990 levels.

The Ministry of Economic Affairs previously estimated that the carbon dioxide level in Taiwan in 2000 would be up 109 percent over the 1990 level.

EPA officials said that although Taiwan is not a UN member, it would not turn away from its responsibility as a member of international community and observe the convention.

They noted that Taiwan is prepared to submit a report on its progress in reducing carbon dioxide emissions during the first FCCC conference to be held next March in Berlin.

### Taipei Delegates To Speak at CITES Meetings in Geneva

OW1903075194 Taipei CNA in English 0658 GMT  
19 Mar 94

[Report by Debbie Kuo]

[Text] Taipei, March 19 (CNA)—Representatives from three Taiwan conservation organizations will be allowed to speak at a Convention on International Trade in Endangered Species (CITES) meeting to be held Monday [21 March] in Geneva.

Representatives from the Society of Wildlife and Nature, the Beautiful Taiwan Foundation and the Green Consumers' Foundation are expected to detail Taiwan's efforts to end its illegal trade in endangered species parts and products during the CITES meeting open only to non-government organizations (NGO).

The NGO meeting gives non-CITES members an opportunity to explain their wildlife conservation efforts to CITES delegates. The meeting is sponsored by the British Environmental Investigation Agency (EIA), according to beautiful Taiwan Foundation Chairman Ted Ting.

As of Saturday, representatives from 10 NGO's had applied to speak during the meeting.

Meanwhile, officials from the Beautiful Taiwan Foundation and the Green Consumers' Foundation announced in Jerusalem earlier this week that they will join an Asian region CITES task force to combat illegal trade in wildlife products, Ting said.

Israel, Indonesia, Thailand, Pakistan and Uzbekistan have all expressed interest in joining the task force, Ting added.

### Taipei Withdraws From CITES Standing Committee Meeting

*OW2103075694 Taipei CNA in English 0740 GMT 21 Mar 94*

[Report by Hao Hsueh-ching and Sofia Wu]

[Text] Geneva, March 21 (CNA)—A Republic of China [ROC] delegation to the Convention on International Trade in Endangered Species (CITES) Standing Committee meeting has decided not to attend the proceedings.

"After careful consideration, we have decided not to attend the CITES meeting to avoid possible embarrassment that might arise from facing mainland Chinese delegates," said Li San-wei, head of the nine-member Taiwan delegation which arrived in Geneva Sunday [20 March] to dissuade the CITES from imposing trade sanctions on Taiwan over wildlife conservation issues.

"Nevertheless," Li said, "we'll grasp every informal opportunity to explain our conservation efforts to delegates from other countries." Li is also deputy director of the ROC Council of Agriculture's Forestry Department.

The CITES meeting, which opened Monday, will discuss rhinoceros and tiger conservation as well as review progress in wildlife conservation in Mainland China, South Korea, Yemen and Taiwan.

Although Taiwan is not a CITES member, CITES Standing Committee Chairman Murray Hosking had hoped Taiwan would attend the Geneva meeting as an observer.

As Mainland China, a CITES member, has consistently claimed sovereignty over Taiwan and sought to downgrade Taiwan in international arenas, Taiwan delegates decided not to attend any formal CITES Standing Committee sessions here. Even if Taiwan delegates were to attend such sessions, they would not be allowed to speak.

The Taiwan delegates, however, will take part in non-government organizations (NGO) sessions to be sponsored by the CITES Standing Committee in connection with its formal annual meeting. During the NGO sessions, Li Ling-ling, a zoology professor at National Taiwan University, will detail Taiwan's efforts to end illegal trade in protected wildlife products.

Representatives from three private Taiwan conservation organizations will also speak in the NGO sessions, stressing Taiwan's determination to eliminate illegal wildlife trade.

Before coming to Geneva, the Taiwan delegates attended a March 14-18 CITES Asian region conference in Jerusalem.

### Bhutanese Princess Sentenced for Smuggling

*OW1903074994 Taipei CNA in English 0714 GMT 19 Mar 94*

[Report by Debbie Kuo]

[Text] Taipei, March 19 (CNA)—Bhutanese Princess Dekiy Wangchuck [spelling of name as received], arrested last September for attempting to smuggle 22 rhino horns and nine bear gall bladders into Taiwan, was sentenced to 10 months in jail Friday [18 March].

Wangchuck, 43, had been detained by the Taoyuan District Court since last Sept. 18 on charges of smuggling endangered species products and violating the wildlife conservation laws.

Although Wangchuck holds a diplomatic passport, the prosecutors said the case was handled according to ordinary criminal procedures to demonstrate the government's determination in cracking down on smuggling and illegal trade in endangered species and related products. Taiwan and Bhutan do not have formal diplomatic ties.

Police seized the 22 rhino horns, weighing 14.8 kilograms and nine bear gall bladders, reportedly worth U.S.\$300,000 on the Taiwan market, when Wangchuck arrived at Chiang Kai-shek International Airport from Hong Kong Sept. 17, 1993.

### Taipei Releases Draft of Harsh Wildlife Protection Law

*OW1403142994 Taipei CNA in English 1326 GMT 14 Mar 94*

[Report by Benjamin Yeh]

[Text] Taipei, March 14 (CNA)—In the face of building international pressure to hit Taiwan with sanctions for its failure to sufficiently crack down on trade in endangered wildlife and wildlife parts, Taiwan on Monday [14 March] released the draft of a harsh conservation law.

The Council of Agriculture finished the revision of the draft Wildlife Protection Law, which provides for a jail term of up to seven years or a fine of NT [New Taiwan] \$2.5 million (U.S.\$94,700) for those who violate the law.

The draft law, which was still being screened at the council Sunday afternoon, was sent to the Executive Yuan on Monday and will be submitted to the Legislative Yuan for approval on [words indistinct].

The rush comes at the same time the Convention on International Trade in Endangered Species (CITES). It is taking a serious look at a boycott proposal against Taiwan for its alleged "perfunctory" crackdown on the illegal trade of rhino horn and tiger bone.

More than 100 conservation representatives from 27 countries are gathering in Jerusalem for a four-day meeting at which Taiwan's wildlife protection efforts are to be discussed.

A nine-member Taiwan delegation is attending the meeting as an observer, but will not be allowed to attend any discussions.

In Taipei, a local conservation group, Green Consumers Foundation, denied accusations that Taiwan is a "black hole of smuggled animals."

"Even if there were a black hole, it was created by CITES's own inappropriate membership requirements," a foundation official said. "It is unreasonable not to give Taiwan membership while asking it to assume the due responsibility of a member."

Jay Fong, secretary-general of the foundation, is a member of the ROC delegation going to Israel. Fong plans to release an investigation report on illegal trade of tiger bone and rhino horn on the island.

### Executive Yuan Approves Wildlife Conservation Law

OW1703140194 Taipei CNA in English 1314 GMT  
17 Mar 94

[Report by Benjamin Yeh]

[Text] Taipei, March 17 (CNA)—The Executive Yuan, or cabinet, on Thursday [17 March] endorsed an amendment to the Wildlife Conservation Law as part of the government's efforts to stave off trade boycott pressure from the international community.

The revised law, pending the approval of the Legislative Yuan, stipulates that without the permission of relevant government authorities, endangered wildlife and endangered wildlife products may not be traded or displayed at public places.

Anyone found guilty could face penalties up to five years in jail or a fine of up to NT\$1.5 million [New Taiwan dollars] (U.S.\$56,820). Repeat offenders could be sentenced up to seven years or fined up to NT\$2.5 million.

Executive Yuan officials have been working nights in an effort to finish screening the revised law, hoping that it can be admitted to the legislature for final approval by March 20, a deadline previously set by the United States.

U.S. Interior Secretary Bruce Babbitt announced in mid-1993 that Taiwan, along with several other countries,

had only perfunctorily cracked down on the illegal trade of rhino horn and tiger bone, and threatened to hit Taiwan with sanctions.

U.S. President Bill Clinton later postponed the deadline Clinton will announce at the end of this month whether to effect sanctions against Taiwan. [sentence as received]

The U.S. is linking its boycott decision to a fact-finding report by the Convention on International Trade in Endangered Species (CITES), which is charting Taiwan's progress in cracking down on the trade.

It is reported that CITES, now gathering in Jerusalem, is mulling the possibility of recommending that the United States go ahead with a boycott.

According to a CNA dispatch from Israel two days ago, Murray Hosking, director of the CITES Standing Committee, in his speech to the CITES Asian regional conference, pointed out that he hopes more substantial results come out before a meeting of the CITES Standing Committee opens in Geneva on March 21.

### Taipei Faces Possible Sanction Over Wildlife Protection

OW0903082694 Taipei CNA in English 0735 GMT  
9 Mar 94

[Report by Bear Li]

[Text] Taipei, March 9 (CNA)—Taiwan will most likely be hit with sanctions by the United States and the Convention on International Trade in Endangered Species (CITES) for alleged poor performance in wildlife protection, according to Ted Ting, head of the Beautiful Taiwan Foundation (BTF).

Ting, who is visiting several wildlife protection groups in Washington D.C., said in a message to BTF headquarters Wednesday [9 March] that there seems to be a consensus among U.S. and CITES officials to "sanction Taiwan first and keep the Chinese mainland on the watch list."

Ting said that the international community seems to be losing patience over Taiwan's inability to crack down on alleged illegal trade in rhino horns and tiger bone.

Besides, he added, they are also upset with Taipei's failure to keep its promise to submit amendments to its Wildlife Protection Law to the Legislative Yuan for approval by the end of February.

The U.S. and CITES have several times turned down requests by non-governmental organizations to impose sanction against Taiwan.

But now, Ting said, they believe Taiwan is not serious about improving its wildlife protection record.

In related news, Vice Chairman Lin Shiang-nung of the Council of Agriculture said Wednesday that his council will send the revised Wildlife Protection Law to the legislature March 20.

### Revised Wildlife Conservation Law Increases Punishments

OW1103074394 Taipei CNA in English 0706 GMT  
11 Mar 94

[Text] Taipei, March 11 (CNA)—The Executive Yuan Thursday [10 March] introduced further amendments to the Wildlife Conservation Law which stipulate longer prison terms and heavier fines for violators.

After two days of debate, yuan members completed new amendments to the Wildlife Conservation Law which introduce tougher measures to crackdown on illegal trade in wildlife in Taiwan.

The amendments stipulate that those found guilty of hunting or killing protected wild animals face prison terms of up to five years and fines as high as NT [New Taiwan] \$1 million (U.S.\$37,037). Repeat offenders face up to seven years in prison and fines up to NT\$2.5 million (U.S.\$92,592).

Previously, prison terms for such violations ranged from six months to three years, and most sentences were commuted to small fines.

The amendments also stipulate that persons who abuse animals and display protected wildlife, either publicly or privately, will be fined NT\$300,000 or sentenced to less than one year in jail.

Medicine shops which sell products labeled as containing endangered species preparations but actually containing legal substitutes also face fines of between NT\$100,000 and NT\$500,000, the draft said.

The amendments will be sent to the Legislative Yuan next week for approval.

Meanwhile, the Ministry of Foreign Affairs said Friday that pressure from the United States Government to boost wildlife protection is mounting as U.S. lawmakers and conservationists have become "impatient" and "disappointed" at Taiwan's efforts to crack down on illegal trade in rhino horn and tiger parts and the late enactment of an efficient Wildlife Protection Law.

Senator Jack Fields (R-Vt.) said Thursday in Washington that he and a number of other senators will soon send a letter to President Bill Clinton demanding trade sanctions against Mainland China, Taiwan and Korea for their illegal trade in endangered animals and products.

Fields said the letter will also ask Taiwan for cash donations to help preserve rhinoceroses and tigers.

President Clinton has until March 25 to decide whether to impose trade sanctions against Mainland China and Taiwan for illegal trade in rhino horn and tiger parts in violation of the international Convention of International Trade in Endangered Species (CITES).

### THAILAND

#### Proposed Natural Gas Pipeline Said To Raise Concerns

BK1103040294 Bangkok THE NATION in English  
11 Mar 94 p A4

[“NATION report” by James Fahn]

[Text] The companies planning to build a pipeline to transport natural gas from an offshore field in Burma to Thailand have for the first time revealed the route the pipeline will take.

Human rights and environmental groups fear that its construction will lead to extensive deforestation and the displacement of villagers and refugees in order to secure the route.

Several refugee camps in the area have already been burnt down and their inhabitants ordered out, although no explanation was given by the Thai authorities.

North of the route, Mon rebel leaders are coming under increasing pressure to sign a ceasefire with the Burmese government. Mon troops are at present skirmishing with Burmese soldiers.

Assuming that the national oil companies of Burma and Thailand—the Myanmar [Burma] Oil & Gas Enterprise (MOGE) and the Petroleum Authority of Thailand (PTT)—can come to an agreement on the price Thailand will pay for the gas, the pipeline will come ashore between the towns of Ye and Tavoy in Burma and follow the Tavoy and Zinba river valleys up toward the border of Thailand.

It will then cross highlands of dense virgin forest to enter Thailand at Ban I-Tong (Nai Et Taung in Burma) in Kanchanaburi Province.

From Ban I-Tong, the pipeline will follow a road down to Thong Pha Phum and then head south to a new power plant to be built in Ratchaburi.

Total, a French state-owned oil company which has signed a production-sharing agreement with the Burmese government for the offshore field in the Gulf of Martaban, will be responsible for constructing the pipeline in Burma while PTT will build it on the Thai side.

The pipeline's chosen course was revealed in a letter dated Jan 12 from Joseph Daniel, Total's director of communications, to Yvette Pierpaoli, a French refugee worker. A copy of the letter has been obtained by THE NATION.

The letter claims that by following the river valleys in Burma—where there are only "scattered shrubs"—and the existing road in Thailand, the pipeline's environmental impact would be minimized. "Only the very last (two to three) kilometres in Burma... will require cutting some trees," it says.

"No population displacement is required on the Total pipeline course which follows a region which as far as we have seen is perfectly quiet," it adds. The letter claims that surveys along the course have been carried out by foot, car, and helicopter since last April.

The route was confirmed by a PTT source who wished to remain anonymous. The source said a decision on the route was made several months ago. Talks between Burma, Thailand and Total were being held yesterday in Bangkok over the price of the gas.

The route is significant in that it helps to explain recent events at the border. On April 7, last year, the 9th Division of the Royal Thai Army reportedly burned down two villages—Aung Tha Pye and Democracy Village—just south of Ban I-Tong, displacing 500 people in all, most of them ethnic Tavoyar refugees.

At the time, the PTT denied knowing about the evictions and claimed the pipeline would follow the old "Death Railway" route from Amherst in Burma through Three Pagoda Pass, well north of Ban I-Tong.

More recently, Mon and Karen groups have come under increasing pressure to sign a ceasefire with the State Law and Order Restoration Council (Slorc) which rules Burma. Both Mon and Karen soldiers are active in the area where the pipeline will be laid.

Sources claim that Burmese troops from Kaleinaung approached the border on Feb 20 near Sangkhla Buri, roughly 30 kms north of Ban I-Tong and 10 kms south of Three Pagoda Pass. Over the last few weeks, the Mon National Liberation Army, which has its headquarters in the area, has reportedly fought intermittent battles with Slorc soldiers, who gained control of Three Pagoda Pass and Nai Et Taung several years ago.

At the same time, the 7,000 Mon refugees in the Loh Loe refugee camp near Sangkhla Buri have been ordered by Thai military authorities to move to Hlakhani—located on the border around five kms from the Slorc military camp at Three Pagoda Pass—by the end of this month.

Phisan Phalatsing, a leader of the Mon community in Thailand, fears that this will leave the refugees extremely vulnerable to attacks by Slorc.

"It's quite clear that the Mon are being pressured to agree to a ceasefire so that the pipeline can be built," he said at a protest held two weeks ago in front of the UN building in Bangkok.

A leaflet handed out by the Thai-Mon protesters stated that "Onshore and off-shore natural resources—such as timber, fish, oil and gas—left over by Mon forefathers in posterity are being sold at a pittance by the Slorc to benefit a small military clique. Mons, who are the real owners, have no voice whatsoever in the disposal of this inheritance."

Meanwhile, within Burma, 20,000-30,000 villagers have been conscripted to build a railroad from Ye to Tavoy

and to upgrade the road which runs between the two coastal towns. The railroad is considered important for Burma's national development but will also make it easier for Slorc troops to secure the area where the pipeline will be laid.

Conditions at the worksites are reported to be appalling and have led many villagers to escape to Thailand, adding to numbers in refugee camps.

The PTT source contacted yesterday said Thailand had preferred a more southerly route for the pipeline but Burmese authorities consider the chosen route to be the best in terms of security. He admitted to being ignorant, however, of the measures being taken to secure the route.

"If the pipeline's impact is too harmful, the project will have to be dropped," he said. But he expressed hope that the money paid by Thailand for the gas would be spread among the Burmese people and used to develop the country.

"Funding of the pipeline will have to come from outside sources, so the Myanmar government will be under pressure to develop the pipeline in a proper way," he said. Talks over financing have yet to take place, he added.

## VIETNAM

### Natural Forest Resources Increase Between 1983-1992

*BK1503081494 Hanoi VNA in English 0636 GMT 15 Mar 94*

[Text] Hanoi VNA March 15—The total resource of natural forests increased by 97.6 million cubic metres between 1983 and 1992, reaching a total of 657.3 million cubic metres. This was announced by the Central Committee for Natural Forest Resource Statistics.

The natural forests include both commercial forests and protective forests. In general, commercial forests dropped during this period while protective forests increased dramatically.

The central highland showed the biggest increase of 60 million cubic metres of protective forests while Duyen Hai, a central province, increased its commercial forests by more than 29.7 million cubic metres.

The coverage of natural forests recorded 3 per cent increases, making up 26 per cent of the total coverage in the country. The central highland and Duyen Hai are considered as the largest coverage areas. The rate of coverage ranges from 34 to 61 per cent.

## HUNGARY

**Economic Minister Praises Japan, U.S. Environmental Aid**

OW1103091894 Tokyo KYODO in English 0722 GMT  
11 Mar 94

[Text] Tokyo, March 11 KYODO—Hungary's economic minister on Friday [10 March] praised the cooperative efforts of Japan and the United States to clean up the environment in Eastern Europe, including his nation.

Bela Kadar, Hungary's minister of international economic relations, noted that Japan recently offered 1 billion yen to support environmental programs in the Eastern European region.

Kadar, who is promoting Hungary's transition from a command economy to a free market structure, visited Japan to attend a conference on Japan-U.S. aid to former Soviet satellite countries.

Kadar said at a press meeting in Tokyo that Eastern European countries are small and their economies are heavily dependent on a stable global economy. "The relationship between Japan and the U.S. is very important from such a viewpoint."

He said that former Soviet bloc countries "must clean up the environment, otherwise they cannot hope to attract foreign investors," Kadar said.

## SLOVAKIA

**Government Discusses Disposal of Radioactive Waste**

AU1103160094 Bratislava HOSPODARSKE NOVINY  
in Slovak 10 Mar 94 p 2

[TA SR report: "State of Radioactive Waste"]

[Excerpts] Bratislava— At its meeting yesterday, the Government of the Slovak Republic discussed, and took note of, the "Concept of Disposing of Radioactive Waste from Nuclear Power Generating Facilities and Other Workplaces With Sources of Ionizing Radiation." The document was submitted to the government session by the Ministry of Economy of the Slovak Republic. [passage omitted]

Radioactive waste is currently being stored on the premises of individual nuclear power stations and the existing capacities are about 50 percent full. Spent fuel is being stored in storage pools of the wet type [skladovacie bazeny mokreho typu] and, in the best possible case, existing storage capacities will last until 1997.

Dominant among solid waste are a large quantity of contaminated soil (1,900 cubic meters) and scrap metal (1,980 tonnes) stemming from the dismantling of some technical installations. According to the Ministry of Economy document, radioactive waste from nuclear power stations is being stored in various storage systems that represent a fairly big risk from the viewpoint of potential environmental impact.

The devices needed to handle, pack, and transport radioactive waste to the storage site have been secured. The long-term safe storage of radioactive waste, however, including the storage and definitive depositing of spent fuel, has not been secured so far, the Ministry of Economy document states.

## REGIONAL AFFAIRS

### Southern Cone Environmental Issues Through 9 March

PY1203184494

[Editorial Report] The following is a compilation of reports on environmental issues monitored through 9 March.

#### Bolivia

Urgent measures must be adopted to preserve the Chiman forest, located in Beni Department, which is being ravaged by the saw mills. This is one of the country's richest forests because of its wood and fauna species which are now facing an accelerated process of destruction. Experts and ethnic groups warn that mahogany, which accounts for 80 percent of the timber exports, could disappear in two or three years. It is estimated that 190,000 cubic meters of mahogany are being exploited nationwide per year. The pollution of rivers by the saw mills and the destruction of the fauna are also seriously threatening the Chiman forest. (La Paz PRESENCIA in Spanish 27 Feb 94 pp 1,6)

#### Brazil

Today in Rio Branco, Uruguay, Brazilian Environment Minister Rubens Ricupero gave Uruguayan Foreign Minister Sergio Abreu four atmosphere monitors that will be used to measure the level of gas emanating from the Candiota thermoelectrical plant in Rio Grande Do Sul. Brazil has thus fulfilled an agreement contained in the Jaguarama Declaration signed in August 1980. The equipment will be installed in Melo and Vichadero towns to determine whether the gases emanating from the Candiota Plant are responsible for the acid rain affecting northern Uruguay. (Brasilia Voz do Brasil Network in Portuguese 2200 GMT 7 Mar 94)

#### Chile

Chile's final position on measures to protect whales will be decided during the administration of President-elect Eduardo Frei who, during his 1993 presidential campaign, expressed his opposition to hunting whales. Frei will have to face the Japanese Government's opposition to the establishment of a whale sanctuary near the Antarctic. (Santiago Radio Cooperativa Network in Spanish 1000 GMT 26 Feb 94)

The National Environment Commission, Conama, on 5 March launched a plan designed to reduce by 60 percent the national consumption of substances that harm the ozone layer in Chile. Conama Executive Secretary Rafael Asenjo said that the plan includes a campaign to mobilize the public, a system to subsidize the technological retooling, and the use of an "ozone stamp" on products that do not harm the ozone layer. This program will last three years. (Madrid EFE in Spanish 1657 GMT 5 Mar 94)

Conama Executive Secretary Rafael Asenjo will, on 9 March, deliver to the media publications summarizing all the updated documents about the Environment Impact Evaluation and National Soil Preservation Plan. The first document is an evaluation of the impact that new industries have on the environment. There are five books in all, containing more than 1,500 pages. According to Conama these are the first publications about this subject in Chile. The basic environment law which was recently promulgated establishes the obligation to evaluate the environmental impact of any public or private investment project before it is constructed. (Santiago Radio Cooperativa Network in Spanish 1000 GMT 9 Mar 94)

#### Paraguay

German experts and the Agriculture and Livestock Ministry have carried out a complete study on the forest areas which existed in many departments between 1945 and 1992. The study shows that 57 percent of Concepcion Department was covered with forests in 1945, but in less than 50 years a large part of the zone has been deforested. In 1991 the department had only 8 percent of the native forests, and 92 percent of the zone lacked a reforestation program. The native forests covered 64 percent of San Pedro Department in 1945, but they were reduced to 22 percent by 1991. (Asuncion NOTICIAS in Spanish 6 Mar 94 p 44)

#### Tasks of Brazilian-Venezuelan Commission Detailed

PY0903152794 Sao Paulo GAZETA MERCANTIL in Portuguese 7 Mar 94 p 3

[Article by Maria Helena Tachinardi from La Guaira, Venezuela]

[Text] On 4 March, at the presidential summer residence "La Guzmania" near Caracas, Brazilian President Itamar Franco and his Venezuelan counterpart Rafael Caldera created a high-level binational commission that will be subdivided into various work groups to deal with the following issues:

—Conclude the pavement of the BR 174 highway, and expand the agreement on land transportation. Brazil will pave 200 km of the highway linking Boa Vista with Santa Elena de Uairen. Brazilian Foreign Minister Celso Amorim said Venezuela could cooperate by supplying the asphalt.

—The electric sector: Brazil will purchase energy from Venezuela and will build the transmission lines. Interim Mines and Energy Minister Jose Israel Vargas said the idea is to get electricity for Manaus from the Guri electric plant. He also said discussions are being held for an exchange between Guri and the Balbina hydroelectric plant, because the two countries have weather problems.

- The hydrographic sector: study the possibility of navigation between the Orinoco and Amazon river basins. President Franco said during a news conference that he discussed with President Caldera the interconnection of the Orinoco and Amazon river basins, which have an extension of approximately 11,000 km. The studies began in 1943. Franco said that what the two governments have in mind is to continue the studies with the objective of "reaching the River Plate basin."
- The mineral sector: The two governments will study the possibility of carrying out compatible joint projects regarding sustainable development and the protection of the indigenous communities. The cooperation agreement signed in 1991 between the Rio Doce Valley Company (CVRD) and the Venezuelan Corporation of Guayana (CVG) will be useful for the development of such projects. Israel Vargas commented that the two countries are studying the possibility of using manganese from Carajas in Venezuelan electric furnaces. The objective is to produce iron alloys for the Venezuelan steel industry. He also reported that studies are being made for joint gold prospecting, to develop the border regions and employ gold prospectors in legal and orderly activities.
- The environmental sector: joint development of ecological tourism, scientific research on biodiversity, and cooperation for recovering the deteriorated areas caused by illegal mining. The illegal activities in the border regions were mentioned in the joint communiqué signed by the two presidents. It says: "The presidents agreed on the need to fight any illegal activities on their common border with determination. With that objective they commit themselves to the reinforcement of appropriate measures for the eradication of illegal mineral prospecting in the border zones, and to carry out an effective control over the use of equipment and other components used in prospecting that contribute to the depredation and contamination of the environment."
- The Sivam [Amazon Region Surveillance System] project: The Venezuelan Government is studying Brazilian participation in carrying out ecological-economic zoning.
- The hemispheric summit: The two presidents expressed their hopes for the upcoming summit, to be held in the United States this year. The two countries

will make joint efforts to have the agenda reflect an effective hemispheric consensus.

—Economic complementation agreement: The two governments will expedite negotiations for reaching an agreement within the framework of the Latin American Integration Association (ALADI). "Such an agreement could also include, in addition to the reduction of trade barriers, incentive measures for border trade, for promoting investment protection, for facilitating the trade of services, for protecting intellectual property, and regulations for preventing unfair competition and access to public biddings."

## MEXICO

### Environmental Office Closes Companies in Northern Region

PA1303030294 Mexico City *EL FINANCIERO* in Spanish 9 Mar 94 pp 1A, 11A

[Report by Claudia Olguin; from the "Analysis" supplement]

[Text] As a result of inspections at industries located along the country's northern border, the Federal Attorney's Office for Environmental Protection [Procuraduria Federal de Proteccion al Ambiente] has temporarily or partially closed more than 121 companies in the region, and it has permanently shut down more than 22, according to official reports obtained by the *EL FINANCIERO* Satellite News Service (Finsat).

Likewise, the latest report states 799 companies in the northern region of the country were subject to fines or penalties.

Studies conducted in this field indicate the effects of industrial development encouraged for 10 years along Mexico's border with the United States have resulted in severe basic infrastructure and environmental protection problems.

International organizations, such as the World Bank, granted several lines of credit for environmental projects in 1993. The line of credit granted by the World Bank stipulates that one of the two lines of credit granted \$1.8 billion for regional environmental projects.

The Mexican and U.S. Governments came to the conclusion, however, the northern region needs \$500 million to supply water, \$2.8 million to treat municipal and industrial waste, \$235 million to treat solid waste, and \$750 million to treat and eliminate toxic waste.

Approximately \$277 million were appropriated last year for regional infrastructure projects. The amount is equivalent to a 60.11-percent annual growth if compared to the 1992 budget.

The government budgeted \$173 million two years ago to build facilities for the treatment of water, elimination of solid waste, highways and transportation, settlements, and human infrastructure.

In sum, the government spent \$1.5 billion between 1991 and 1993 to finance solutions to environmental

problems caused by industrial development along the border.

The problems and backwardness in environmental technology, equipment, and information sectors, particularly evident at the country's northern border, are not new within an international context.

## ALGERIA

### French Cooperation in Fighting Water Pollution

*94WN0176A Algiers ALGER REPUBLICAIN in French*  
*20 Jan 94 p 7*

[Unattributed article: "Algeria and France: A Partnership To Fight Pollution"—first paragraph is ALGER REPUBLICAIN introduction]

[Text] Researchers and industrialists who are partners in a French-Algerian program for scientific cooperation in the area of used water treatment will meet on 21 January at the French National Center for Scientific Research (CNRS) in Montpellier to assess their work.

Focusing on establishing efficient, innovative technologies and the training of national specialists in Algeria through a knowledge transfer, this program, after two years in existence, was found to have yielded a "very positive" outcome by the CNRS's Languedoc-Roussillon regional delegation. The delegation, in a communique sent Friday to APS, found that "original solutions have been found to treat effluents from the National Cellulose and Paper Industry's [CELPAP] pulp paper plant in Baba-Ali, near Algiers" and that "about 15 internships have been served in Montpellier by Algerian engineers."

"This effort," the delegation added, "which is aimed at implementing new membrane technologies to remove the pollution from the water supplies of the countries of the Maghreb and at the fight against pollution in the Mediterranean, has been strengthened by another cooperative program financed by the European Community between the Montpellier teams and the Algerian (especially from the National Polytechnic and Houari-Boumediene University) and Moroccan (University of Fes) teams."

According to the CNRS's regional delegation, "the success of this cooperation is based on the sharing by numerous agencies (universities, research agencies, and industrialists)" and it emphasized "the importance of the specific progress made in Montpellier in the area of membrane technologies."

These programs, based on the principle of partnership and shared objectives, reflect the spirit and the organization of scientific cooperation with countries on the southern rim of the Mediterranean as envisioned by the CNRS and reflect the willingness of that agency to strengthen relations with the industrial sector.

## INDIA

### Vanarai Chief Alerts Rao to Threats to Forests

*BK1403045094 Delhi INDIAN EXPRESS in English*  
*27 Feb 94 p 11*

[Text] New Delhi—Former vice chairman of Planning Commission Mohan Dharia, who is currently heading

Vanarai, people's movement for a green India, has alerted Prime Minister P.V. Narasimha Rao of moves by certain vested interests to secure forest land for growing raw material for industries.

The disclosure made during an international workshop on India's forest management and ecological revival, have spurred Dharia to write to the Prime Minister and seek his intervention in attempts to dilute the forest policy.

"Raw material required for paper or wood industry should be produced on private lands and valuable forests reserved for permanent green cover and natural biosphere," Dharia says.

Most of the wastelands in the country belong to individuals and with farm forestry, it is possible to make them productive. "In view of the great threat to our environment, I am sure you will not deviate from the earlier policy of the Government on forests. Environmentalists in the country are opposed to the move to hand over forest lands to industry," says Dharia.

### Cabinet Lets 50 Polluting Industrial Units 'Off the Hook'

*BK1403030494 Delhi INDIAN EXPRESS in English*  
*3 Mar 94 p 1*

[Excerpt] Fifty highly polluting industrial units, 26 of them from the public sector, that have failed to install pollution abatement measures have been let off the hook after a Cabinet meeting presided by the Prime Minister.

In January 1991 the Environment and Forest Ministry had identified 17 categories of industries that caused maximum pollution in the country and 1,551 industrial units set up prior to 1981, were asked to install pollution control equipment and bring down emissions in air and water to the standards prescribed. The deadline was December 31 1993.

At a meeting this January, it was pointed out that about 50 industries had not even begun to implement the order. Among them were 14 sugar units, five distilleries, four cement plants, four thermal plants, four leather and two pharmaceutical units. Of the 50 defaulting units, 23 were in Andhra.

Within the Ministry itself, there were differences as to whether a few of these firms should be shut down to show the Ministry's determination, or whether the ministry should just continue to flex its muscles, since closure would throw thousands of workers out of a job.

The matter was finally taken to Cabinet, which ruled out the closure of any industry since it could cause large-scale unemployment. Chief Ministers also opposed the closure move. Several units, it was pointed out, were sick and there was no money even to resuscitate them.

Orissa Chief Minister Biju Patnaik argued that the polluting thermal power plant at Talcher was set up in

1952, long before the pollution laws were introduced. He said 2,500 people would lose jobs if just this one unit was closed. The State would also suffer for want of power. Since isolated polluting industries in rural areas did less harm than polluting units in urban industrial clusters, they should be shown leniency, he argued.

Now, the state pollution control boards have been asked to prosecute these units under the Environment Protection Act for not complying with standards set. Ironically, the penalty will not be for failing to install pollution control measures but for not complying with the standards prescribed for emissions. The sentence could be five years imprisonment or a fine of Rs [rupees] 1 lakh or both.

However, it is pertinent to point out that the official dealing with these cases in the ministry could not recall a single case of successful prosecution of such industrial units. Industrial units that do not have funds to install pollution control equipment, do manage to raise resources to fight the litigation.

The chairman of the Central Pollution Control Board Dilip Biswas has asked state boards to:

- 1) verify wilful defaulters of the 17 highly polluting industries;
- 2) determine the time required by each units for completion of pollution control programme on case to case basis and give a time frame not exceeding six months;
- 3) take immediate action against wilful defaulters.

[passage omitted listing defaulters]

## IRAN

### Agreement Signed To Eliminate CFC Use

*LD1603115694 Tehran Voice of the Islamic Republic of Iran First Program Network in Persian 1030 GMT 16 Mar 94*

[Text] An agreement to set up a bureau to supervise implementation of the Islamic Republic of Iran's commitments in connection with eliminating substances which erode the ozone layer, CFC's, was signed between Mr. Manafi, head of the Environmental Protection Organization [EPO], and Mr. (Michael Schulenberg), head of the UN Development Program office in Tehran.

Under the agreement the EPO will carry out a program to replace CFC's in the country's refrigeration industries.

CFC's are among substances which erode the earth's ozone layer. Under the Vienna convention and the Montreal Protocol, many countries have undertaken to eliminate such substances.

### Prosecutor-General Warns Against 'Barbaric' Deforestation

*LD0803211894 Tehran IRNA in English 1929 GMT 8 Mar 94*

[Text] Tehran, March, 8, IRNA—Prosecutor-General, Ayatollah Seyyed Abolfazl Musavi-Tabrizi today, warned the destroyers of the country's forests and pastures, saying that they would be dealt with severely for precipitating ecological disasters. In a strongly-worded statement, the prosecutor-general described as a "barbaric and inhuman act" the destruction of the limited green space of the country.

The statement termed as an "irreparable catastrophe" the destruction of forests and pastures and called for people's help to protect the country's green space as their national-religious duty.

He also called on the Majlis to legislate necessary rules and regulations in order to prevent deforestation.

## RUSSIA

**Russian Greenpeace Says West Dumping Toxic Waste in Russia**

*LD1603142994 Stockholm Radio Sweden in Swedish 1130 GMT 16 Mar 94*

[Passages within quotation marks recorded]

[Text] Yet another environmental problem has hit the already badly affected Russia. Environmentally dangerous waste from the rich Western Europe is being dumped in Russia. The waste is exported as recyclable but in actual fact it is unusable poison, says Russian Greenpeace.

**Russian Greenpeace spokesman Dima Litvinov:** "Now they are looking to Russia and other parts of the former Soviet Union as a good place where they can get rid of their waste."

**Correspondent:** This is Dima Litvinov, one of the Russian Greenpeace activists who have warned against this development, that Western Europe is beginning to dump its dangerous waste in Eastern Europe.

Russian Greenpeace has just discovered 16 train carriages standing unprotected in a railway siding in the Orenburg area in the region bordering on Kazakhstan. The railway carriages hold 1,200 tonnes of waste from Germany and France. The waste contains poisons, including cadmium and arsenic. The waste has been sold as raw material for the region's nickel industry but it is totally useless. Because of the dangerous cargo, the Russian railways refuse to have anything to do with the carriages any longer and the authorities have not found anyone willing to receive the dangerous cargo. Right now most of the cargo is frozen, but soon spring will arrive, melting it, and a catastrophe will not then be far away, says Dima Litvinov.

**Litvinov:** "There is a huge risk that if nothing is done with this material, there will be a real disaster in the area."

**Correspondent:** What might actually happen?

**Litvinov:** "If the material gets into the drinking water tables it is certain that the people in the city will become ill, they may have to be evacuated. I don't know whether it can be calculated now how many might die from it."

**Correspondent:** Although the so-called Basle Convention bans export of waste that is dangerous to the environment, the convention makes an exception for waste that may be defined as recyclable. As early as next week, this export is to be discussed in Geneva, and several West European countries, led by Denmark, have demanded a tightening of the convention so that there will be no repetition of the case involving the railway carriages in Orenburg.

**Navy Responds To MAINICHI Report on Nuclear Waste Dumping**

*LD1403172194 Moscow ITAR-TASS World Service in Russian 1547 GMT 14 Mar 94*

[Report by ITAR-TASS correspondents Vadim Byrkin and Mikhail Karlov]

[Excerpts] Moscow, 14 Mar—The dumping of liquid radioactive waste into the Sea of Japan by vessels of the Pacific Fleet will only be carried out with the permission of the Russian Government. The Russian Naval Forces press center said this today in response to a request by an ITAR-TASS correspondent for a comment on a report by the Japanese paper MAINICHI.

The paper reported today, citing Valeriy Danilyan, the chief of the Pacific Fleet Chemical Service, that Russia could resume the dumping of waste in the Sea of Japan in May this year unless foreign countries, including Japan, provided financial help with building facilities to use and store liquid radioactive waste. The Russian Naval Forces press center said that this was the personal view of one of the Pacific Fleet leaders. However, the government has so far not taken a decision on the dumping of waste in the Sea of Japan. [passage omitted: background to the problem that blew up in October 1993]

Only the use of special facilities for rendering the waste harmless can solve the problem. A Finance Ministry representative recently said at a session of a government commission that the issue of allocating money for these problems will be resolved very soon.

It should be noted that Russia has not received the help promised by Western countries for the construction of the facilities. And the tanker for the storage and transportation of radioactive waste offered by Japan turned out to be wholly unsuitable for use.

**Paper Reports on Submarine Dismantling Plant in Vladivostok**

*OW1303145194 Tokyo TOKYO SHIMBUN in Japanese 11 Mar 94 Morning Edition p 1*

[Report by A. Polutov]

[Text] Vladivostok, 10 Mar—TOKYO SHIMBUN is the first foreign news organization to be allowed to report on a dismantling plant for nuclear-powered submarines in the Russian Far East. This plant is known to be the source of radioactive waste dumped into the Japan Sea last October, and we were allowed to take photos of submarines being dismantled. The plant was filled with about 300 containers of solid nuclear waste, and it was obvious the plant's storage capacity was reaching its limits.

Last month, Russia refused to accept the new London Convention, which prohibits the dumping of any radioactive waste into the sea. The submarine dismantling

plant is facing difficulties in continuing its operations due to a surplus of radioactive waste. Therefore, the plant is calling for the resumption of dumping of radioactive waste.

"Zvezda (Star)" plant is located in Borshoy-Kamen Bay, 120 kilometers east of Vladivostok. The plant was founded in 1954 as a dock for warships and submarines, but is currently dismantling superannuated nuclear-powered submarines which were scrapped one after another during the past several years.

Unauthorized entry to the plant is strictly forbidden, and the gate is guarded by security authorities. The plant is divided into A and B zones, and when this correspondent visited the facility, a "Delta-1" class (displacement: 9,000 tons) was being disassembled in A zone. Both the bow and the stern of the Delta-1 were sliced off, and the body was placed in a dock as if it were a huge sausage. Its missile launcher used to be a great threat to the Western nations, but it has now been reduced to a pile of scrap iron. Compared to the beautifully streamlined shapes of Russian submarines, of which this correspondent is familiar, the heap of scrap iron looked miserable.

Director Maslakov said that the Zvezda plant had already dismantled five nuclear submarines. He added that the plant currently has four submarines to dismantle, but two of them are still untouched.

Since the Russian Pacific Fleet has discontinued its dumping of solid nuclear waste from 1990, about 300 containers (with a capacity of 1.5 cubic meters each) of solid nuclear waste have been stored in the plant. The dumping of liquid nuclear waste was also suspended last fall due to criticism from the international community. The liquid waste tankers "TNT-5" and "TNT-27" were moored at a pier near the plant, but they were said to be full of liquid waste.

Explaining the seriousness of the current situation, Director Maslakov stated: "This plant is just like a man without a kidney. The dismantling of nuclear submarines cannot continue without the disposal of nuclear waste. If the plant stops its operations, the Pacific Fleet would become unable to carry on its normal duties, which may cause social unrest."

To say nothing of the budget to build new disposal facilities, the plant cannot afford to pay wages to its employees. Director Maslakov said "the resumption of nuclear waste dumping is inevitable unless Japan and other Western nations offer funds for constructing (nuclear waste disposal facilities)."

#### Fedorov Releases New Book on CW Programs

94P501084 Moscow ROSSIYSKIYE VESTI in Russian  
17 Mar 94 p 12

[Unattributed item under "Courier of the S&T Revolution" rubric: "Chemical Weapons Are a Threat to the Ecology"]

[Text] Chemical weapons lost their significance after the appearance of the atomic bomb. However, their production is continuing in Russia, a fact which threatens the ecology. Lev Fedorov, a scientist and chemist, made this declaration intending to cause a sensation, on the occasion of presenting his book "Chemical Weapons in Russia: History, Ecology, Politics."

In the scientific work which he presented, Doctor of Chemical Sciences Fedorov makes public a survey of the events connected with the activities of the military-chemical complex, whose secrets have traditionally been held "behind seven seals."

The book is full of sensations. In particular, the scientist asserts that there are about 100 geographic regions in Russia, where it is a threat to one's life and health to live, as a result of the production, testing or storage of toxic substances for military use.

#### Navy Officers Want Japanese Aid for Nuke Waste Facility

OW1103042694 Tokyo NHK General Television Network in Japanese 1025 GMT 10 Mar 94

[Announcer-read report over video; from "NHK News 7" program]

[Text] In Russia, radioactive waste has been leaking from tankers, and the storage of radioactive waste is in a dangerous state. The Russian Pacific Fleet has made a request for Japanese Government financial aid to construct ground facilities for its storage. The request was conveyed during an interview with two officers of the Russian Pacific Fleet by NHK's Vladivostok bureau. [begin recording]

**Danilyan, captain 1st rank, chief of the Radioactive and Chemical Defense Operations Department:** Since this is a decommissioned tanker, we suspect that what we already have are micro leaks. In other words, radioactive waste leaks out and settles on the bottom of Bolshoy Kamen Bay. We suspect this is so. [end recording].

[Begin recording]

**Chishisenko, captain 1st rank, chief engineer of the Technology Bureau:** Therefore, we believe the waste should be transferred to other containers in the shortest time possible. [end recording].

In connection with this, the Russian Pacific Fleet plans to construct by May this year ground facilities to store liquid radioactive waste at Sysoyev Bay in the eastern part of Vladivostok, and other ground facilities to dispose of radioactive waste at Bolshoy Kamen Bay where tankers are presently berthed.

The Russian Pacific Fleet, which estimates the cost of constructing the facilities at around \$50 million, wants the Japanese Government to provide financial aid. The Russian Pacific Fleet feels a strong sense of crisis as the

Russian Government is not showing any eagerness to use funds from Japan to resolve the radioactive storage issue.

The request comes shortly before Foreign Minister Tsutomu Hata's 19 March visit to Moscow. It is believed to be aimed at explaining the situation to the Japanese Government before he arrives in Moscow.

### State of Russia's Ecology for 1993 Reviewed

94WN0185A Moscow SEGODNYA in Russian 10 Feb 94 p 9

[Article by Vera Romanova: "Review of Ecological Situation in 1993; No Reason for Optimism"]

[Text] Around 33,000 specialists and academics are working for the Russian Ministry of Environmental Protection and Natural Resources (Minprirody), including the 630 members of the central staff. These seemingly high figures are not that impressive, because ecologists are responsible for drafting legislative instruments and administrative ordinances and for monitoring and evaluating environmental conditions in various parts of the country.

The conclusions everyone has drawn from the results for 1993 are not optimistic. Ecological conditions are still growing worse. In addition to the decline of technological discipline at many enterprises, there is the low rate of retooling, the reduced allocations for environmental construction and renovation projects, and the use of substandard types of fuel. Ecological conditions are still at the critical point in 44 cities in the country (Moscow, Novokuznetsk, Nizhniy Tagil, Bratsk, and others). In just the first half of 1993, 207 cases of pollution levels 10 or more times in excess of allowable limits were recorded here. There has been no decrease in the total number of accidents or in the ecologically harmful emissions of industrial and agricultural facilities and public utilities. The operations of more than 120 enterprises, shops, units, and facilities were halted (temporarily) for violations of water conservation laws.

Specialists are still particularly concerned about the radiological conditions throughout the country, and especially in the areas surrounding facilities of the nuclear complex. Mobile sources of pollution are creating additional problems: The total quantity of harmful vehicle emissions has increased dramatically, and this is certainly connected with the increase in the number of vehicle owners who will not stop driving even in winter. Some species of animals and fish have been reduced to the critical point as a result of the deterioration of their habitats and the higher number of poachers.

One of the problems inhibiting effective Minprirody operations, according to Minister Viktor Danilov-Danilyan, is the flawed legal base. Many necessary laws simply do not exist, and those which have been passed are frequently contradictory. The failure to draw clear distinctions between the functions of central and

regional agencies has led to the proverbial situation in which "too many cooks are spoiling the soup."

As Danilov-Danilyan said at the final collegial meeting of Minprirody, departmental specialists drafted 44 presidential edicts last year and coordinated 42 draft legal instruments received from other organizations. Subdivisions of the state Board of Environmental Impact Appraisals reviewed 64,000 pre-planning and planning documents of various types and standardizing documents. These impressive figures include the fundamentals of Russian Federation water, land, and forest legislation, draft laws "On Lake Baykal," "On Ecological Security," and "On Oil and Gas," and the "Fundamentals of RF Legislation on Flora." Their future, however, now depends on the new parliament, which is unlikely to consider these bills until it has "scrutinized" some political matters and has scored additional privileges for its members.

Finances are another of the ecologists' concerns. According to Danilov-Danilyan, ecological policy should be coordinated with economic reforms. The amount allocated to finance all of the operations of Minprirody organizations in 1993 was 22.6 billion rubles, which was equivalent to 83.2 percent of the amount agreed upon with the Ministry of Finance and just over half of the estimated cost of these operations.

The 30 programs of environmental recovery and several dozen programs of regional, oblast, territorial, and municipal socioeconomic development are based on the scientific and technical program called "Russia's Ecological Security." The implementation of this plan, however, might be disrupted because the financing has been cut to just about one-third of the original amount. Only 2.6 billion of the 6.87 billion rubles was allocated in 1993.

The required amounts are minimal on the national scale and are within the limits of the error built into the state budget. "Ecological allocations are not this low in any other country in the world. That is why the unsatisfactory state of our environment is not surprising. Under these conditions, there is no hope of improvement," the minister has repeatedly pointed out.

In spite of this, six natural preserves (with a total area of 8 million hectares) were established last year, and the plans were drawn up for seven more, which should be established this year. Ecologists have calculated that around 40 percent of Russia's territory (7-8 million square kilometers) is unaffected by economic activity, except for the planes flying overhead. This "ecological gold mine" must be protected from industrial inroads. As a result of the work on the plans for the sound network of state natural preserves and national parks, these territories (along with the 77 existing preserves, with an area of 27 million hectares) will cover 53.6 million hectares, or 3.12 percent of the area of the Russian Federation, by 2005.

Six new maritime inspection boards were also created for the protection of the resources of the Russian Federation's territorial waters, continental shelf, and maritime economic zone, which are under unequivocal federal jurisdiction. Because of the inadequate equipment of these inspection boards, however, the state of Russia's maritime resources and their ecologically acceptable use are being monitored on an area of only 900,000 square kilometers, or only 13 percent of the total. It is possible that the Minprirody treasury will be supplemented slightly by unpaid fines and pending claims amounting to 7 million rubles and just over 500 million rubles respectively.

Figures of this size are unlikely to intimidate large enterprises. It is often simpler and more convenient for them to pay the fines than to change their technology, install sewage treatment equipment, etc. Money and the profit motive are the deciding factors in a market economy. This is why Minprirody plans to continue developing environmental and conservation tax benefits, instituting preferential customs duties for operations connected with environmental activity, and developing market mechanisms promoting the prudent use of resources on different levels (the federation, the region, and the enterprise). It will also finish setting standards to regulate environmental impact studies in privatization projects and in the collection of environmental damages caused by industrial accidents. Standard fees will be set for radioactive pollution. Experiments will be conducted with regional ecological insurance and with improved economic mechanisms in territories under special protection.

Viktor Danilov-Danilyan is determined to take action. It is possible that he now has a partner in Aleksandr Zaveryukha, the government curator of the ecological establishment, who already attended a Minprirody collegial meeting. In any case, he is certain to take a special interest in the group of "land" problems.

#### **Statutes on Russian State Environmental Strategy Approved**

94WN0186A Moscow ROSSIYSKAYA GAZETA  
in Russian 9 Feb 94 p 4

[Presidential Edict No. 236 on Russian Federation State Strategy of Environmental Protection and Sustained Development, signed by President B. Yeltsin in Moscow on 4 February 1994]

[Text] For the purpose of defining the Russian Federation's state strategy of action to protect the environment and secure sustained development, and guided by the documents of the UN Conference on Environment and Development, I hereby decree that:

1. The Fundamental Provisions of the Russian Federation State Strategy of Environmental Protection and Sustained Development, in accordance with the addendum, are approved.

#### **2. The Government of the Russian Federation will do the following:**

approve the plan of action by the Government of the Russian Federation to protect the environment in 1994 and 1995 within the next two months as the first stage in implementing the Fundamental Provisions of the Russian Federation State Strategy of Environmental Protection and Sustained Development;

draft a plan for the Russian Federation's transition to the patterns of sustained development, securing the balanced resolution of problems in long-term socioeconomic development and maintaining favorable environmental conditions and natural resource potential for the purpose of satisfying the vital needs of the population, and submit this plan to the president of the Russian Federation for consideration in 1994.

#### **3. This edict will go into force at the time it is signed.**

[Signed] B. Yeltsin, President of the Russian Federation  
The Kremlin, Moscow

4 February 1994  
No. 236

#### **Fundamental Provisions of Russian Federation State Strategy of Environmental Protection and Sustained Development**

The Fundamental Provisions of the Russian Federation State Strategy of Environmental Protection and Sustained Development will serve as the basis for constructive interaction by government agencies of the Russian Federation and its members, agencies of local self-government, businessmen, and public associations in the comprehensive resolution of problems in the balanced development of the economy and improvement of environmental conditions.

The pursuit of the Russian Federation state strategy of environmental protection and sustained development will presuppose the exercise of the right guaranteed to citizens by the Constitution of the Russian Federation to a healthy environment and the right of future generations to make use of natural resource potential for continued stable development, as well as the attainment of current socioeconomic objectives in combination with the necessary measures to protect and improve the environment and conserve and restore natural resources.

#### **1. The Guarantee of Ecologically Safe and Sustained Development Under the Conditions of Market Relations**

Government regulation of resource use and the stimulation of environmental activity by means of purposeful socioeconomic, financial, and tax policies under the conditions of developing market relations will be conducted to secure ecologically safe and sustained development. The goal of economic activity will be economic prosperity combined with the ecological safety of Russia.

The fundamental guidelines of activity to secure ecologically safe and sustained development will be the following:

the ecologically sound distribution of productive forces;  
the ecologically safe development of industry, power engineering, transportation, and public utilities;  
the ecologically safe development of agriculture;  
the conservation of renewable natural resources;  
the prudent use of non-renewable natural resources;  
the broader use of secondary resources and the recycling, decontamination, and disposal of waste;  
the improvement of management in the sphere of environmental protection, resource use, and the emergency warning and prevention network.

## 2. The Protection of the Human Habitat

The following are the fundamental guidelines of activity in the creation of the necessary conditions for the exercise of the constitutional right of citizens to live in a healthy environment:

the creation of a healthy living environment for people in urban and rural communities;  
the development of the network of natural recreation complexes and health resorts;  
the improvement of the quality of the food supply;  
the provision of the population with an excellent supply of drinking water;  
the prevention of air and water pollution;  
the guarantee of radiation safety;  
the anticipation and alleviation of the hazardous effects of natural emergencies, industrial accidents, and disasters;  
the ecological training and education of the population.

## 3. The Reclamation (or Restoration) of Damaged Ecosystems in Ecologically Inferior Regions of Russia

The following are the fundamental guidelines of activity for the purpose of eliminating the increasingly acute conflicts between the development of productive forces and the maintenance of an ecological balance in regions with unfavorable environmental conditions and securing the natural development of ecosystems and the preservation and restoration of unique natural complexes and landscapes during the resolution of territorial economic problems with the best possible methods of resource use and environmental protection:

the rectification of the critical ecological conditions in several large cities and industrial centers;

the alleviation of the after-effects of the radioactive pollution of territories;

the preservation of the natural complex of the Lake Baykal basin;

the implementation of the "Volga Revival" program;  
the restoration of damaged ecosystems on the Black Sea coast;

the protection of the population and coastal territories from the effects of the rising water level in the Caspian Sea;

the preservation of the natural complexes of lakes Onega and Ladoga and the Gulf of Neva;

the resolution of ecological problems in regions of the Far North with special resource use regulations;

the preservation and restoration of the ecosystems of the "Caucasus Mineral Springs" resort complex.

## 4. Participation in the Resolution of Global Ecological Problems

The following are the fundamental guidelines of activity for the development of international cooperation in the preservation, protection, and restoration of the earth's ecosystems:

the preservation of biodiversity;  
the protection of the ozone layer;  
the prevention of human activity causing climate changes;  
the protection of forests and reforestation;  
the development and improvement of the network of natural territories under special protection;  
the safe elimination of chemical and nuclear weapons;  
the resolution of interstate ecological problems (trans-border pollution and the problems of the Baltic, Caspian, Black, and Aral seas and the Arctic zone);  
the restoration of ecosystems and species of regional flora and fauna of the Azov Sea;  
the resolution of the problems of the World Ocean.

### Environment Ministry Terms Greenpeace Report 'Disinformation'

94WN0184B Moscow SPASENIYE in Russian  
No 5, Feb 94 pp 1-2

[Text of Minprirody of Russia press service announcement "Greenpeace, To Put It Mildly, Is Wrong"; with commentary]

[Text] In late 1993 the Russian branch of Greenpeace distributed a report entitled "Russia: "A Dump for

Western Wastes." Following that articles with similar content appeared in the Russian mass information media.

In connection with this, the press service of Minprirody [Ministry of the Environment and Natural Resources] is authorized to announce that the allegation that Russia has already become a proving ground for disposing of dangerous industrial wastes from Western countries has no basis at all and is pure disinformation.

The data cited in the Greenpeace report stating that in 6 years 96 attempts were made to import 34 million tonnes of waste to Russia illustrate only intentions and nothing more. Attempts made are not yet accomplished facts which constitute a real threat to Russia's ecological security.

#### Commentary

As experience accumulated has shown, the system for exporting and importing industrial waste which operates in our country does not do a reliable job of insuring us against the infiltration of large batches of dangerous waste into Russia's territory. According to the decree of the government, MBES [Ministry of Foreign Economic Relations] of Russia issues the licenses and the State Customs Committee monitors the import of waste. The basis for issuing a license is the agreement of Minprirody of Russia, which conducts the necessary expert ecological study in such cases. This system applies to all subjects of economic activity on Russia's territory, and the violation of it entails administrative and criminal responsibility.

According to Minprirody data, the territorial nature protection organs have rejected the overwhelming majority of proposals of Western firms and Russian intermediary firms on the basis of the findings of expert ecological studies.

In 1992-1993 they approved licenses to import only small batches of industrial waste, largely for research purposes (for example, 130 kilograms of polymer waste—the Mikas AG Joint Stock Company, 800 kilograms of automobile scrap—the Association of Engineering Research, and so forth). In addition, licenses to import about 50,000 tonnes of waste from Ukraine and Kazakhstan were permitted to be issued. But that is another subheading, as they say. These wastes (metallurgical tailings and granular slag) serve as raw material for Russia's cement enterprises and have been supplied to Russia within the framework of cooperation since the days of the former USSR and, most importantly, are not classified as dangerous wastes.

Data from the Greenpeace report which was already mentioned are more evidence of the effectiveness of the present system; according to the report 4,000 tonnes of waste and 7,500 old tires have been disposed of in Russia in the last 6 years, and that is 8,500 times, meaning almost to the fourth order, less than those 34 million tonnes which were indicated as attempted imports.

For your information: every year about 25 million tonnes of dangerous waste are formed in the OECD [Organization for Economic Cooperation and Development] countries and more than 200 million tonnes—in the United States.

Incidentally, it is appropriate to mention that the radioactive waste which figures as a component of this 4,000 tonnes represents spent nuclear fuel from atomic power plants built by the Soviet Union and is imported to Russia under existing agreements to which Article 50 of the Law "On Protecting the Natural Environment" does not retroactively apply. So one should not be too hasty and "ring the bell before looking at the church calendar."

In order to stop the illegal attempts to import dangerous waste, the danger of which cannot be underestimated, Minprirody is working in close contact with law enforcement organs as well as the nature protection departments of Latvia, Poland, Germany, and a number of other countries.

Taking into account the ever-increasing desire of foreign firms to increase waste imports, including dangerous waste, into Russia, Minprirody of Russia has prepared a packet of documents needed to ratify the Basel Convention and a draft decree of the RF Government which, among other things, envisions compiling a list of wastes whose import onto Russia's territory must be prohibited.

Let us say in conclusion that an objective evaluation of the real state of affairs fundamentally refutes Greenpeace's theory that Russia has been converted into a dump for Western waste. This once again illustrates Greenpeace's inadequate understanding of the essence of Russian ecological problems, which brings to mind that this organization's choice of priorities was made in advance, rather than dictated by Russia's interests.

However, sharing the concern of public organizations and the mass information media over foreign firms' attempts to import dangerous wastes into Russia, Minprirody of Russia invites them to participate in cooperation and a mutual exchange of information on the attempts made for this purpose in order to set up a double barrier, state and public, against dangerous wastes.

For additional information, call: 254-49-88.

#### Greenpeace Report Details Toxic Waste Imports From West

94WN0184A Moscow MOSKOVSKAYA PRAVDA  
in Russian 4 Feb 94 pp 1-2

[Text, under the rubric "Living Environment," of excerpts from the Green Peace Report "Russia: A Dump for Western Wastes. 1987-1993"; with commentary by Ye. Subbotina]

[Text] "Russia: A Dump for Western Wastes. 1987-1993." That is what the special report of Greenpeace of

**Russia is called. Its purpose is to make public transactions involving trade in wastes and their disposal in Russia. MOSKOVSKAYA PRAVDA decided to publish excerpts from this report.**

As Greenpeace has found out, in the period from 1987 through November 1993, 95 firms made 86 attempts to export 34 million tonnes of dangerous waste from Western Europe to Russia's territory. Most of the proposals originated in Germany, but export attempts were also made by Switzerland, Austria, the United States, Italy, France, Belgium, Canada, Spain, Finland, Portugal, and Sweden. More than half the attempts were made by German firms and 80 percent of the waste (28 million tonnes) was produced in Germany.

Waste dealers most often use the pretext of "processing" or "recycling" to justify exports and take advantage of loopholes in laws which allow export for the purpose of processing with a minimum of monitoring. These proposals on processing presuppose either operations presented in an altogether false light or extremely dirty ones which would be illegal in the exporting country.

In this report alone, 90 percent of the schemes for exporting radioactive waste, whose future fate is well-known, were implemented under the pretext of "recycling." Greenpeace asserts that the economic incentive for exporting waste to less developed countries is so great that if a justification such as "processing" is the only way to export waste, all the waste dealers will become "processing specialists."

In fact, of the 96 proposals for importing waste made to Russia, 13 deal with garbage burning plants and "processing" enterprises.

Among the proposed wastes were 12 million tonnes of waste water sludge and contaminated soil, 10 million tonnes of slag and ashes from garbage burning plants, more than 700,000 tonnes of metallurgical waste, cable fragments, filtered dust, old paint, pesticides, chemicals, used tires, and plastic and radioactive waste.

There were 4,000 tonnes of waste successfully transported and disposed of on Russia's territory, including radioactive waste, used catalytic converters, mercury waste, copper slag, old pesticides, paint, chemicals, plastic, and 7,500 old tires.

In the opinion of Greenpeace, the figures cited give an idea of merely the tip of the iceberg of waste which is more and more regularly imported to Russia's territory. Greenpeace is afraid that present conditions will merely help turn Russia into a colony for dumping waste from Western Europe if the export and import of waste is not immediately banned.

These conditions are developing from the lack of bans on exports in the Western exporting countries and the crisis situation in Russia's economy, where the desire to obtain hard currency and the predominance among new entrepreneurs of a mentality which can be described as "take

everything while you still can," as well as the lack of clarity in legislative and administrative structures, corruption on all levels, and our vast territory promote the export of waste to our country.

A provision completely banning the export of dangerous waste, including waste intended for "processing," from the OECD [Organization for Economic Cooperation and Development] countries to countries which are not OECD members must be included in the laws of Germany and the European Economic Community and in the Basel Convention.

Moreover, many Western countries are more prepared to impose a ban on the export of waste to the developing countries than on the export of waste to the countries of the former Eastern Bloc, which are not considered developing countries. Such a choice, which makes it possible to turn a country such as Russia, which is undergoing a serious economic and ecological crisis, into a dump, is immoral. Russia has enough of its own ecological problems. Aggravating them with waste from the West means sacrificing Russia as an international dump. That, moreover, frees the West of the need to introduce clean production instead of toxic technologies which promote the production of harmful wastes. Political intervention is now needed to set up a ban on trade in wastes.

#### Dirty Business

Waste elimination has become an extremely profitable sector of the economy, and new regulations combined with the rapid reduction in capacities to eliminate waste merely promote higher prices. In order to avoid expenditures, a whole army of consultants, brokers, and waste-shipping companies has created a developed industry for handling waste which is called the "waste trade." This is the principle of its operation: the broker proposes to a company to remove dangerous waste at prices lower than existing ones for eliminating waste. Next the broker places the waste in a rented warehouse. Then he begins to look for somewhere to put the waste in another state whose government consents to it and where it can be done free of charge or at nominal cost. Very often officials receive bribes to do this.

Frequently the middlemen try to sell the importing country equipment to eliminate the waste—a garbage burning plant or facility for disposing of the waste which supposedly meets Western standards.

Waste exporters prefer to do business with countries where the ecology movement is less influential, the laws less strict, and the leadership and executive branch of power have a shortage of resources as a result of lower development and sometimes even a crisis in the economy.

#### Disposal Under a Different Name

In the 1980's most waste dealers did not attempt to hide the main purpose of their operations—to get rid of

dangerous waste. Now, however, "processing" or "recycling" is almost always mentioned as a pretext for transporting waste from countries with a more developed economy to countries with a less developed economy. Greenpeace has been a witness to innumerable justifications for the waste trade done under the guise of "processing," "humanitarian aid," "energy reduction," and "transfer of technology." Many of those who are involved in "processing" receive most of the profits from the very act of accepting waste for its "removal." "Processing" specialists receive money for accepting waste, since it is well known that waste is dangerous. Inasmuch as it is prohibited to discharge or burn an ever-increasing number of types of waste, the processing procedures are considered a new means to get rid of waste in industry.

Instead of preventing the production of dangerous waste, it is processed. When harmful waste is processed, it remains, damaging human health.

#### First Africa, Then Eastern Europe

In the 1980's the African continent became the first victim of the trade in toxins. In 1988 dozens of cases of such exports became known and appeared in the headlines of the world press. As a result, the African countries condemned the import of waste and imposed a ban on it. When it became clear to the waste dealers that Africa was under control, they left to seek other large areas in order to dispose of the waste.

In Eastern Europe Poland became the first country to suffer. Poland was the first to open up her borders to the independent activity of Western firms. In 1989 the leaders of Solidarity adopted legislation which prohibited the import of any waste. The Polish government managed to bring the problem under control. According to Greenpeace data, starting in 1991 the waste brought to Poland has been transferred to the Baltic states, Romania, Georgia, Slovenia, Croatia, Albania, Ukraine, and, quite recently, Russia.

It is now clear that the countries of Western Europe intend to use the states of Eastern Europe as colonies where waste and dangerous materials are sent for "processing."

#### The Victim Is Russia

The Russian market is extremely attractive to Western middlemen because of the difference in prices for removing waste from the West and to Russia. Because of this difference, enormous profits may be obtained. The privatization of former state enterprises and the lack of efficient official monitoring have led to an unchecked desire to obtain profits at any cost, without thinking of society or the environment. In post-Soviet society, after they lost official power, the former power structures began to seek new ways to support a high standard of living using completely self-centered and at times even criminal methods.

Another problem is related to the political decentralization of the decision making process. As a result decisions are made by people who do not have a clear idea of the political and global ecological consequences of such decisions.

#### The Import of Waste to Russia—the Tip of the Iceberg

Greenpeace took the material for this report from German, Russian, and other international sources. There is no doubt of the fact that the attempts to import waste presented in the report are merely the tip of the iceberg of what is called the "import of waste," and a large number of the precedents have not been publicized.

Not one country, with the exception of Poland (in Central and Eastern Europe), offers data on the waste trade.

Representatives of "power" structures like the KGB and of the criminal world often work on the staff of firms involved in the waste trade.

Because of Russia's disastrous financial condition, the danger arises that an increasing number of waste dealers will rush to this region in search of new markets for their dirty business. This danger can be averted by imposing a ban on the waste trade in the exporting countries and in Russia.

#### Commentary by Ye. Subbotina

The Greenpeace report speaks of terrible things. Africa has rebuffed those who wanted to turn the continent into a poisonous dump. Russia has offered up its neck and the international mafia of waste dealers is making the noose tighter and tighter. A big-time game is being played with the difference in prices: in Germany eliminating 1 tonne of household waste costs 300 German marks, 1 tonne of solvents—1,200, and 1 tonne of pesticides—11,000 German marks, while burying them in Russia costs 35 marks a tonne! And when there is the smell of such large amounts of money...

Waste comes to Russia by rail and by sea and ocean. Plastic waste from the United States arrived in St. Petersburg in November of the year before last. The garbage was shipped to the Intertreyd firm (a Russian firm) which is no longer in existence. The fire in Orekhovo-Zuyevo received a great deal of publicity when the inhabitants of that city in the Moscow region began to choke from the acrid smoke. Very labored breathing, headaches, and vomiting were caused by the waste which was scattered about the grounds of one of the enterprises. These items came from Germany to the Moscow scientific production association Plastik and the limited partnership Sirin in December 1992. The waste was cellulose and the plastic contained lethal components—arsenic, mercury, cadmium, and lead. It is noteworthy that another 100 tonnes of this same waste found refuge in Chelyabinsk. It has not yet caught fire there.

And how costly just one offer to dump 12 million tonnes of waste water sludge in Russia is! Those who imagine that we have little of our own sludge should just take a drive to Maryino: a "deposit" of 20 million tonnes is located there in very close proximity to residential dwellings. Moscow has been racking its brains for a long time over what to do with it. The poison is terrible and there is simply nowhere to take it.

It is clear that to avoid becoming a world dump, Russia must stand up for its vital interests in the most decisive way. No considerations of financial benefit can be taken into account: ultimately it will have to be paid for in human lives. Of course, this will be a blow to the hairy paws of the mafia, but we have no other choice. Consequently, we need a program of tough measures by law enforcement organs. Laws to prevent the penetration of any waste across the border must be passed and, of course, we must try to insert a provision into the Basel Convention completely banning the import of poison to Russia.

#### **White Book Issued on Moscow Environmental Conditions**

*94WN0179A Moscow SPASENIYE in Russian No 5, Feb 94 p 7*

[Report by A. Frolov, report on population's health with table on cancer mortality rate, and report on counterfeit therapeutic balms by A. I. Leontyev, under the rubric "House of Nature": "The White Book of Moscow"]

[Text] The White Book "State Report on the Condition of the Natural Environment of the City of Moscow" has been published for the first time in the city's history.

The report was prepared by decision No. 18 of the presidium of the Mossovet dated 15 April 1993. The client was Moskomprirody [Moscow Nature Committee] and the chief agent was the Moscow Special Purpose Fund "Ecology and the Condition of the Living Environment" (MTsF ESSO ["Moskovskiy tselevoy fond 'Ekologiya i sostoyaniye sredy obitaniya"]). The chairman of the editorial board was A. V. Yablokov.

For decades the city's nature protection organs maintained a humble silence regarding the activity of the city authorities and the Council of Ministers nomenklatura, who turned Moscow into an ecological disaster zone.

This humility cost Muscovites dearly—millions of residents have died 8-10 years early and hundreds of thousands of children have been born with birth defects and pathologies.

This humility cost the state dearly too—each person who died early or became disabled could have benefited society. Just the cost of treatment and sick leave eats up hundreds of billions of rubles.

This humility left the managers of hundreds of small "Chernobyl's" which contaminated the city unpunished

and doomed any good ecological programs to failure for a lack of objective information.

But now the first breach has appeared in the wall of silence—the White Book of Moscow, which for the first time makes it possible to assess the condition of the living environment and the population's health both for the city as a whole and by individual zones.

There is no reason to retell the report's content. Suffice it to say that the report includes chapters which characterize the natural conditions in the city, the condition of the atmospheric air, water resources, soils, and the plant and animal worlds, the scope of technogenic impact, radiation, noise, and electromagnetic pollution, technogenic changes in the geological milieu, the state of public health, and the activity of the nature protection organizations. The report includes more than 40 maps and figures which for the first time make it possible to comprehensively assess the condition of the living environment.

I am certain that every Muscovite will be interested to know the report's contents and find out just what is happening in his microrayon and on his street.

But the history of the report's appearance is no less interesting.

First, the report appeared against the bureaucrats' wishes. The city administration deliberately did absolutely nothing to prepare it, hoping that the idea would die of itself. A paradoxical fact is that the State Report was financed not from the city budget but at the expense of the City Ecology Fund. Only the sincere enthusiasm and the unselfishness, rare in our times, of the researchers enabled this unique publication to be prepared.

They were able to defend the principle that it is first of all the performing organization that determines the report's content; and that organization was MTSF "ESSO," which hired such organizations as MGU [Moscow State University], MosTsGMS, IMGRE [Institute of Mineralogy, Geochemistry, and Crystallochemistry of Rare Elements], VIMS [All-Russian Scientific Research Institute of Mineral Raw Materials], GMPP of Aerogeology, MGTs SEN, NIIPI Genplana, Geoekotsentr [Geoecocenter], and others, in all more than 20 organizations. In preparing the report they managed to avoid nomenklatura censorship or being placed under the eye of the latest city "father."

Taking into account the trend toward restoration of the nomenklatura dictatorship in Russia, it is quite possible that the report will become a bibliographic rarity. One may predict that subsequent reports, if they are prepared, will be done with proper humility.

Of course, the report was no great revelation. It once again used the example of Moscow to prove that the condition of the environment is the dirtiest secret of the

obsolete totalitarian state. But the report gives an objective and fairly frightening picture of the party-management nomenklatura's genocide against its own people.

Much of what was intended in the report was not accomplished. The trends toward change in the condition of the environment were not followed for a long period of time, a substantiated prediction of the possible consequences of maintaining the present attitude toward nature was not given, comparative data with other major cities of the world were not given, the correlation between certain types of diseases and environmental pollution was not specified, and economic substantiation of the benefits of rational nature use was not given.

The report will be useful to teachers in schools, students, businessmen who occupy city real estate, bureaucrats making decisions, and simply Muscovites who love their city.

I would like to thank everyone who took part in preparing the report. In 15 years, or even in 50 years, this book will be remembered as the basis which first gave comprehensive information on the city of Moscow, information against which all subsequent changes will be compared. I would very much hope that the changes will be for the better. That was the reason the report was prepared.

Call telephone number 281-93-56 on questions about obtaining the report.

#### The Population's Health

From 1985 through 1990, indicators of natural population growth differed by regions of the city of Moscow. The highest natural population growth per 1,000 inhabitants was found in Zelenograd (+4.3) and Solntsevo (+3.3). There was negative natural growth in Frunzenskiy Rayon (-6.4), Pervomayskiy Rayon (-5.5), Lenigradskiy Rayon (-5.2), and Oktyabrskiy Rayon (-5.1).

Against the background of the sharp drop in the birth rate, the proportion of children born with developmental defects is rising. The mortality rate of the population in the city of Moscow is gradually increasing, by 2-3 percent a year beginning in 1987. In 1991 the mortality rate was a record for the last 30 years. Child mortality is a most

important indicator of a society's health. In the last 5 year period, an average of 2,923 children 14 years of age and under and 527 adolescents aged 15-19 years died every year. Infant mortality (children under 1 year old) is of most significance in describing the population's sanitary-hygienic condition. In the early 1980's, around 20 children died per 1,000 births. This indicator has now dropped to 15. Birth defects and birth-related deaths dominate in the structure of infant mortality. That is the cause of death of 75-83 percent of the infants.

Mortality from diseases of the respiratory organs is significant (17 per 10,000 births). Children over 1 year of age most often died from injuries and accidents (2 per 10,000), birth defects (1.75), or tumors (1.6). Adolescent mortality rose from 8.3 per 10,000 in 1987 to 10.4 in 1991. More than 50 percent of the adolescents die of injuries and accidents and about 15 percent of them die of tumors.

Mortality among working-age Muscovites was 50.5 per 10,000. The working-age population dies at a rate 6 times higher than that of people aged 2-19. Over the last 5 years, an increase has been observed in the mortality rate of the working-age population. The greatest increase in the mortality rate was found among persons 30-40 years of age. The main causes of death among the working-age population of the city of Moscow are heart and vascular diseases—33.8 percent, tumors—26.1 percent, and injuries and accidents—24.4 percent. As compared with 1988, mortality rate indicators from injuries and accidents rose by 61 percent in 1991, and from tumors and cardiovascular diseases—by 16 percent and 15 percent, respectively. The cancer mortality rate in the city of Moscow in the last 30 years is on a steady increase. Thus, the mortality rate indicator from lung cancer was 26.8 per 100,000 inhabitants in 1959 as compared to 36.3 in 1989, while for stomach cancer this indicator dropped from 71.8 to 41.7. Mortality from cancer of other parts of the body is rising gradually. High indicators of cancer mortality which were substantially above the average city level were found in six of the city's rayons: Kalininskiy, Kiyevskiy, Zheleznodorozhnyy, Sevastopol'skiy, and Solntsevskiy rayons and the city of Zelenograd. Average life expectancy for those born in Moscow from 1980 through 1991 is 69 years.

From the state report on the condition of the environment in the city of Moscow.

**General Indicators of Natural Population Change (per 1,000 people). Distribution of Mortality Rate from Oncological Diseases for the City of Moscow in 1988-1989 (per 100,000 in population).**

City of Moscow			Russian Federation		
Year	Birth Rate	Mortality Rate	Natural Increase (per 1,000 people)	Natural Increase per 1,000 in Population	
				Overall	In Cities
1980	13.6	11.7	+1.9	4.9	5.8
1985	13.8	12.1	+1.7	5.3	5.2
1986	14.3	11.5	+2.8	6.8	7.1
1987	14.2	11.9	+2.3	6.7	6.9
1988	13.1	12.0	+1.1	5.3	5.5
1989	11.8	12.4	-0.6	3.9	4.0
1990	10.5	12.8	-2.3	2.2	2.3
1991	9.2	12.9	-3.7	0.7	0.6

**Attention: Counterfeit! [by A. I. Leontyev]**

Not only money but even Karavayev therapeutic balms are being counterfeited.

Almost 3 years ago the Public Fund To Promote Research and Initiatives of Citizens on Making Man and the Environment Healthy was set up in Moscow; it was named after V. V. Karavayev, the philosopher and scientist who formulated the integrated preventive-therapeutic system.

A person can be healthy only when the three basic metabolic processes in his system occur normally, Karavayev asserted. They include a physiologically normal diet, breathing, and the exchange of mental information (thinking). Any deviation in these processes has an immediate effect on the acid-base equilibrium (ABE) in the blood. Each person can ascertain the ABE in his blood by the color of the conjunctiva (the inside surface of the lower eyelid). Normally it is bright pink. If there is a skew toward the alkaline, it is dark red to beet red. With a skew toward acidic, it is pale pink. For most of our fellow countrymen, the ABE of the blood is skewed toward acidic (acidosis).

Karavayev balms, which affect the skin and mucous membranes, are one way to restore the balance. They are Vitaon, a butyric extract, Auron, a hydrous extract, and Somatot, a hydrous-butyric extract, from medicinal plants. There are from 9 to 13 medicinal herbs in them, including St. John's wort, yarrow, mint, calendula, licorice, thyme, and others.

The therapeutic qualities of the balms are unique, and urologists, stomatologists, gynecologists, gastroenterologists, radiologists, and other specialists immediately started to use them.

The Karavayev Fund developed the technology and organized industrial production of the balms. They immediately became popular among Muscovites and do not last long on pharmacy shelves.

Unfortunately, slick operators have recently, at the peak of the balms' popularity, begun moving in: counterfeit Karavayev balms have appeared, poured into similar bottles and with Karavayev labels. But the counterfeits do not have the therapeutic effect inherent in the real Karavayev balms. One can distinguish the Karavayev balms from the counterfeits only by looking at the quality passport on the Karavayev balms. The seal and stamp of the Karavayev Fund should be there.

So before you lay down your good money, ask the manager of the pharmacy to show you the appropriate documents.

**Environment Minister Calls for More German Investment**

*AU1103161194 Duesseldorf HANDELSBLATT  
in German 11 Mar 94 p 28*

[Report on interview with Environment Minister Victor Danilov-Danilyan by Frank Matthias Drost in Leipzig on 10 March: "German Investors Should Commit Themselves More Strongly"]

[Text] The minister for environment and natural resources of the Russian Federation, Victor Danilov-Danilyan, has criticized the privatization policy of his own government. Foreign enterprises should be given the opportunity to acquire Russian state enterprises, the environment minister said in an interview with HANDELSBLATT. Although enterprises are currently being privatized it does not take place in the way "that I consider necessary."

For the reformist politician it is impossible to understand why the Russian Government does not use the possibility to mobilize foreign capital by selling state enterprises. In view of the pronounced decline in production in Russian industry, funds for investment are very scarce, Danilov-Danilyan said.

The country is not able by itself to modernize enterprises and thus to reduce the burden on the environment. The

minister is convinced that Russian industry must be modernized to achieve success in the area of ecology in Russia. Higher direct investment by foreign enterprises might help to eliminate the capital shortage.

The environment minister confirmed the figures contained in a report issued by the German Economic Research Institute, Berlin, according to which the share of environmental investment in total investment in Russia was 2 percent in 1992 and continues to decrease. This decline can be ended only when industrial production recovers, Danilov-Danilyan said. The government is of the opinion that 1994 will be the last year of falling production in the Russian Federation.

He said he did not understand the "inactivity of German enterprises" regarding investment projects in Russia. Regarding the major projects that involve billions of rubles for the development and production of oil and natural gas, German companies did "not stand out," and the Russians noticed a "lack of initiative." The environment minister does not accept the argument of difficult financing. "The Americans and Japanese have managed to establish themselves on the Russian market." The Germans should follow their example.

Still, as far as smaller projects are concerned, cooperation does work. At the Terratec special fair for environmental protection two contracts were signed on German-Russian cooperation in the sphere of environmental protection. One project is the development of a measuring network for the continuous monitoring of the air quality in the Saratov area. This is a first step to include Russia into the European environmental data network. The partner to the contract is the Committee for Environmental Protection and Natural Resources of the Saratov area and Medium-Sensor GmbH in Berlin.

The second agreement has to do with the development of an industry for the processing of secondary plastics in the Russian Federation. A processing plant with a capacity of 1,000 tonnes per month should be set up in the first phase. The partners to the contract are the industrial and trading company Cooperation and Development Ltd., Moscow, and the Ostimex Import und Export Handelsgesellschaft mbH, Berlin.

Things are taking place on a regional level, too. The district committee of Ekaterinburg (formerly Sverdlovsk) last year bought two mobile environmental monitoring stations in Germany. These stations were financed by the Russian ecological funds. These come from payments from enterprises that pollute the environment. The German-Russian project for the cleansing of the Tula area is also being financed through local funds.

For Danilov-Danilyan, Germany is one of the leading countries in the area of environmental technology. However, even Russia has very good environmental technologies. A series of innovative achievements, which were originally developed in armament enterprises, can be used also for environmental protection. A plant for the incineration of toxic refuse was, for example, developed

on the basis of a rocket engine. Temperatures of up to 3,500 degrees are reached in this process. The environment minister is hoping that this year it will be possible to finance the program "Conversion for Environmental Protection," which was developed more than two years ago. The program consists of several hundreds of projects whose development has been concluded. The "real achievements" in the area of conversion are not yet very impressive, Danilov-Danilyan stated.

### **Ufa Inhabitants' Health Endangered by Dioxin**

*PM1703095994 Moscow ROSSIYSKAYA GAZETA  
in Russian 16 Mar 94 First Edition p 2*

[Unattributed report under "Nature Conservation" rubric: "Ufa Remains a Place Dangerous to Life"]

[Text] Research by scientists has shown that in individual parts of Ufa the maximum permissible concentrations of an extremely toxic substance—dioxin—in the air exceed the norm by tens of times. In the area where the "Khimprom" Production Association, which produces herbicides, is located this figure is equal to almost 20,000 times the maximum permissible concentration. Newborn babies take in up to 80 times the maximum permissible concentration of dioxin every day with their mother's milk. The republic's gene pool is perishing catastrophically. Mothers' milk and the blood and adipose tissue of the inhabitants of Bashkortostan are literally "larded" with toxic substances in quantities dangerous to life. This has been stated by Gennadiy Minin, the republic's chief state physician.

Misfortune came to the land of Bashkortostan in April 1990. Unpurified waste and drainage water from Ufa's "Khimprom" flowed into the city water intake, poisoning thousands of cubic meters of drinking water with phenol. Knowing nothing, almost all the residents of the city with a population of 1 million used poisoned water for a long time. Then a large amount of dioxin was discovered in the water, the air, and the soil.

Despite the city folk's protests, "Khimprom" is continuing to poison the environment or, rather, what is left of it. In addition, one more installation in Ufa has been discovered which is surreptitiously destroying nature and people with dioxin—an experimental plant for the production of herbicides.

Equipment to analyze the content of dioxin in the environment was purchased abroad at tremendous expense. But this is not the first year that it has been lying totally inactive. Taking advantage of the lack of control over it, the Bashkortostan State Committee for Ecology and Nature Use is squandering huge sums allocated to nature conservation. But a start has not been made on resolving the "dioxin problem" in the republic.

**Ecological Adviser Says Chemical Weapons Amount to 40,000 Tons**

*LD1703134894 Moscow INTERFAX in English  
1125 GMT 17 Mar 94*

[Text] Over the whole period of its existence the Soviet state produced approximately 10 times more chemical weapons [CW] than the volume which is in Russia's storage facilities now, Chairman of the Security Council's Inter-Departmental Commission on Ecological Security Aleksey Yablokov told Interfax.

A consultant of this commission Valeriy Menshikov explained that in the international convention "On Prohibition of Development, Production, Storage, and Exploitation of Chemical Weapons and its Destruction" signed on January 13, 1993 Russia indicated that there were about 40,000 tons of chemical weapons in its arsenal, stored on 7 bases, 6—in Russia's European part and one—behind the Ural Mountain Range.

However, as Menshikov says, there were several cases of secret destruction of chemical weapons and poisonous gases in the summer and autumn 1993.

Given the fact that official destruction of chemical weapons should be carried out under the supervision of international controllers, now, as before Russia possesses 40,000 tons of chemical weapons. According to Menshikov, this means that by the moment the convention was signed the amount of these weapons exceeded the announced one.

Menshikov failed to answer the question whether this means that there are military bases with chemical weapons which were not announced officially and if by now the number of the chemical weapons has been brought in correspondence with the announced number.

Menshikov specially stressed that destruction of chemical weapons in accordance with the signed convention is an important step but "not a sufficient one." In his words, in order "to put an end to the possibility of chemical war and its threat" it is necessary to make public all data about the production, storage, testing, and destruction of chemical weapons in the past and to thoroughly investigate and, if necessary, to decontaminate the regions where it was stored.

In the adverse case, Menshikov believes, the effects of chemical weapons earlier dumped on the territory of this nation and in the nearby seas will still be felt for some decades to come.

**Ecologists Condemn Government Appraisal of Nuclear Accident**

*LD1703161394 Moscow ITAR-TASS in English  
1206 GMT 17 Mar 94*

[Article by ITAR-TASS correspondent Mikhail Karlov]

[Text] Moscow March 17 TASS—Members of the learned Council of the Applied Ecology Institute who gathered for their final session here, said on Thursday that "according to official norms, the accident in Tomsk-7 was estimated, regrettably, as not very serious."

Institute Deputy Director Andrey Ivanov said in an interview with ITAR-TASS the following: "It is regrettable that the Chernobyl disaster and its aftermaths are taken as a standard of nuclear accidents. Events on a smaller scale are regarded as not serious."

According to previous reports, the accident took place at a radiochemical factory of the Siberian combine located near the city of Tomsk-7 on April 6, 1993. A radioactive discharge into the air contaminated over 200 square kilometers.

Institute specialists estimated the content of radionuclides in fresh water at villages which turned to be in the area of the radioactive fallout, in the air and soil. The permissible dose for the village of Georgiyevka situated next to Tomsk-7 was set at 0.15 rem (official norm—0.5 rem).

However, specialists did not calculate possible after-effects of "hot particles," the effect of which on the human organism is unpredictable for the time being. Villagers have not been resettled from the dangerous zone.

Funds appropriated by the federal budget to do away with the accident's aftermaths were not always used for this purpose. Additional financing of work entirely depends on the management of the chemical combine.

Scholars are more optimistic about the radioecological situation in the Yenisey river basin. A chemical combine situated in the area of Krasnoyarsk had been discharging radioactive waste from uniflow nuclear piles into the river for over 30 years.

As a result, it contaminated water, bottom sediments, biological objects and flood-lands situated at a considerable distance from the combine. Direct discharge was stopped in autumn 1992.

However, the bottom and flood-lands contaminated with long-lived radionuclides will be for long sources of secondary radioactive pollution of the river. It is heartening, the deputy director noted, that the content of short-and medium-lived nuclides in water sharply dropped after discharges were stopped.

Regrettably, the content of long-lived cesium-137, cobalt-60 and europium-152 and -154 virtually did not change. The scientist noted that these nuclides remain a potential source for the Yenisey's contamination.

**Panov Says Further Nuclear Waste Dumping Unnecessary**

*OW1803015794 Tokyo KYODO in English 0127 GMT 18 Mar 94*

[Text] Moscow, March 18 KYODO—Russian does not need for the moment to resume nuclear waste dumping at sea thanks to help from Japan, Russian Deputy Foreign Minister Aleksandr Panov said Thursday [17 March].

"Because the construction of facilities to store liquid nuclear waste will be completed by the end of April with Japan's assistance, there will be no need for the moment to resume dumping," Panov said in an interview with KYODO NEWS SERVICE.

Russia's Pacific Fleet had indicated it could be forced to resume dumping nuclear waste in the Sea of Japan in May because its tanker TNT-5, loaded with some 500 tons of radioactive waste, is decaying and the risk of leakage of the waste is increasing.

The construction cost of the storage facilities will be covered by 100 million dollars Japan has pledged to provide to Russia to help it dispose radioactive waste, Panov said.

Panov expressed thanks for Japan's assistance. He made the remarks before Japanese Foreign Minister Tsutomu Hata visits Moscow from Saturday to Monday.

Last October, Russia dumped 800 tons of liquid radioactive waste into the Sea of Japan from a vessel of its Pacific Fleet at a point some 550 kilometers west of Hakodate in Hokkaido, Japan's northernmost main island.

Russia suspended its planned second phase of dumping in the Sea of Japan following protests from Japan and South Korea. Moscow later urged the Japanese Government to shoulder the cost of construction of the land-based waste disposal facility.

Russia and Japan since then have continued working-level contacts on the disposal of Russia's radioactive waste.

**Navy Denies Decision Made To Dump Waste in Sea of Japan**

*LD2003045494 Moscow Mayak Radio Network in Russian 2200 GMT 19 Mar 94*

[Text] The dumping of liquid nuclear waste in the Sea of Japan by vessels of the Pacific Fleet may be carried out only if permitted by the Russian Government. An ITAR-TASS correspondent learned this at the press center of the Russian Navy when he asked the center to comment on a report published in Japan's MAINICHI. Citing the head of the chemical service of the Pacific Fleet, Valeriy Danilyan, the newspaper wrote that Russia may resume the discharge of the waste in the Sea of Japan in May this year if foreign countries, including Japan, fail to provide

financial aid for building special units. The press center of the Russian Navy said that this is just a personal opinion of one of the commanders of the Pacific Fleet. The Russian Government has made no decision concerning the dumping of nuclear waste in the Sea of Japan.

**Ecology Panel Chief Hosts News Conference on Environment**

*PM2103095994 Moscow PRAVDA in Russian 18 Mar 94 p 2*

[Viktor Rudenko report: "Is the Duma Trying To Allow Us To Live? Only Ecological Crisis Is More Acute Than Economic Crisis"]

[Text] "The economic crisis cannot distract society from resolving the highly acute problems of environmental protection," Prof. Mikhail Lemeshev, chairman of the Committee for Ecology, said at a 16 March news conference in the State Duma. As far as the general situation in the country is concerned these issues are not so much the concern of future generations as a matter of life and death for the current generation.

In his opinion, the solution to the crisis is to ecologize the economy. Some 18 draft laws will be submitted to the Duma for consideration in the near future, these laws' task being to put the national economy back on the rails of stable development. Prof. Lemeshev described five of them as priorities. Among them the Law "On Production and Consumption Waste Products," which is to safeguard the country against highly toxic imported waste among other things. This question is causing public concern owing to the furor in connection with the 18 freightcars of toxins from France, the Netherlands, and Israel that have unexpectedly shown up in Orenburg Oblast and pose a real threat to the population's health.

Nikolay Astafyev, chairman of the Committee for Natural Resources and the Use of Nature, spoke of the need for urgent addenda to the Russian Federation Law "On Mineral Resources" since many kinds of minerals will be totally depleted over the next year if their plunderous extraction is not stopped. The same can be said of biological resources: wild animals, whole populations of which are being wiped out for their valuable antlers or pelts.

Prof. Lemeshev is hoping for constructive cooperation with the government since, according to him, the Russian Ministry of the Environment and Natural Resources and the Duma's nature conservation committees espouse similar positions on key issues.

**Duma Ecology Committee Chairman Reviews Environmental Priorities**

*94WN0214A Moscow SPASENIYE in Russian No 6, Feb 94 p 1*

[Interview, under the rubric "Assumption of a Post," with Mikhail Yakovlevich Lemeshev, chairman of the

Ecology Committee of the State Duma of the Russian Federation Federal Assembly, conducted by Vladimir Mikhaylov; date and place not given)

[Text] **Vladimir Mikhaylov talks with the chairman of the Ecology Committee of the State Duma of the Russian Federation Federal Assembly, Mikhail Yakovlevich Lemeshev.**

**Mikhaylov:** Mikhail Yakovlevich, first of all I would like to congratulate you on assuming the post, your election as chairman of the State Duma Ecology Committee. Even though it seems to many people today that ecological problems are not the most important thing in our present life and that there are certainly things which are more important. Do you agree with this assertion?

**Lemeshev:** I am deeply certain that the rebirth of Russia and the Russian people, which everyone under the sun is talking about now, is impossible without solving ecological problems. This is determined by the fact that in itself the ecological situation in the country is simply disastrous; everyone understands that, there is no need to explain. In fact today we are talking about survival. Take the demographic aspect. It is an altogether depressing situation; essentially the indigenous peoples of Russia are dying out. The scientific research of prestigious scientists, in particular American and Japanese scientists, shows that 40 percent of the children born in recent times are already ill. What will happen to them later, in their adult lives? Generally two-thirds of all diseases today are linked to the bad state of the environment. This is more urgent for Russia than for the West.

Above all it is environmental pollution in cities with a population of more than a million inhabitants which causes alarm. Here, as a rule, there is very bad water (and generally it is bad everywhere in our country) and food products contain pesticides, nitrates, and various biological additives. And what is interesting is that this applies less to domestically made products than to imported products. Propaganda, advertising, and pretty packaging do their work here; we are still susceptible to all this. The developed countries often sell us what there is no demand for in their countries. Incidentally, there are fairly strict nature protection laws in many countries of the Western world.

In my opinion, that is where we must focus our activity, on improving the health of our people. That is the primary task. Yes, biological diversity and problems of protected territories are important, and that is good, but the most important thing is people's health.

**Mikhaylov:** But to do all this capital is needed, and I would assume a considerable amount of it. Where is it supposed to come from, at the expense of what and at whose expense? After all, the only thing anyone talks about is the meager state treasury and the incredible state budget deficit. As a member of the State Duma, you are obliged to take into account the conditions of our reality. Are all these things you are so persuasively discussing realistic from a financial standpoint?

**Lemeshev:** As an economist, I am simply depressed by the very widespread opinion that once the economy is in crisis, it is then impossible to work on economic problems. It is just when such a crisis arises that we supposedly take up ecology in earnest. And the saddest thing is that, in my opinion, this is simply a bad idea—it finds a response in people's souls. That is certainly understandable: people are on the edge of survival and this is the point where it is every man for himself, as they say. And that is radically wrong. Without solving ecological problems, we will never raise the economy either, I am absolutely convinced of that.

Here is a clear example. With environmental pollution, people get sick more often and more seriously and hence do not participate in production so actively. Does that have an effect on the state's economy or not? In order to treat people, buy medicine, and build hospitals, an enormous amount of capital is needed. Does that really not put a burden on the economy? Only altogether short-sighted people are unable to see that.

All right, let us take production of fabrics. For the fabric to be good quality, we need not simply water, but clean water. Isn't it easier and cheaper not to pollute the water from the start rather than spend enormous amounts of money to decontaminate it? Remember that it is impossible to separate the economy and ecology—it is a single metasystem. And I would like to say one more thing: There are no ecological problems of one state or another; ecological problems cannot be solved within the boundaries of one state. Say the Scandinavian countries have been very successful in solving ecological problems, but 90 percent of the pollution of the natural environment comes to them from other countries.

**Mikhaylov:** But that is putting the question in general terms, so to speak; now what practical steps should the committee begin with, in your opinion? What draft laws do you consider paramount in the sphere of environmental protection?

**Lemeshev:** I would not want to complain right off of lack of organization, but as of now for 15 deputies and just as many apparatus employees we have two small rooms, no typewriters, no computers, and no organizational equipment. I do not know how we are going to work.

As for the committee's legislative work, I believe preparing a draft law on ecological disaster zones is most important. True, all Russia can now be called an ecological disaster zone, but there are the worst ones, say the Chernobyl disaster zone, rayons where chemical and petrochemical production are concentrated, and production sites of hydrocarbon raw materials in northern Russia where a terrible blow is being inflicted on the habitat of the small peoples. We are in dire need of a law on the ecological expert study, not a departmental one, as is customary now, but a federal state expert study with broad public participation. Only in that way will we be able to put up a barrier on the path of projects that destroy both nature and humans themselves.

And isn't legislation on drinking water important? Must we not make additions to the Criminal Code related to accountability for ecological crimes? So there is a vast field of work.

**Mikhaylov:** Mikhail Yakovlevich, looking over the list of members of your committee, the fair degree of diversity caught my attention: there are deputies from "Russia's Choice," and communists, and members of the Democratic Party of Russia, and you yourself represent the LDPR [Liberal Democratic Party of Russia] faction. Doesn't it seem to you that this lack of political uniformity will hinder the committee's normal lawmaking work? Moreover, you must build constructive relations with the Russian Federation Ministry of Protection of the Environment and Natural Resources.

**Lemeshev:** As for the latter, I feel optimistic because of the fact that the minister himself, Viktor Ivanovich Danilov-Danilyan, is a member of our committee, and at least for now, we have a mutual understanding on all issues. Although I have heard plenty of the unbiased polemics between Danilov-Danilyan and the chairman of the RF Interdepartmental Commission on Ecological Safety, Aleksey Vladimirovich Yablokov, which unfolded on the pages of NEZAVISIMAYA GAZETA, personally I do not quite like it when such disagreements arise between such respected people. It is simply the scourge of our Russian intelligentsia and we must discard departmental, political, and professional ambitions when it is a matter of the common cause. We must change our psychology. But I look at the work of our committee with hope because I am certain that the task of preserving the environment can unite people of the most diverse political views.

#### SPASENIYE Information

**Mikhail Yakovlevich Lemeshev, born 1927, Russian, doctor of economic sciences. Is an academician of the Academy of Economic Sciences of Russia in which he heads the ecology division. The author of 12 monographs, 2 of which, "Ekologicheskaya katastrofa v SSSR" [The Ecological Disaster in the USSR] and "Vlast vedomstv—ekologicheskiy kollaps" [The Power of Departments—Ecological Collapse], were published abroad but have not yet been printed in our country. Is a member of the LDPR faction in the State Duma.**

#### Scientist Sees Radiation Danger in Areas Considered Safe by IAEA

94WN0203A Moscow RABOCHAYA TRIBUNA  
in Russian 1 Mar 94 p 4

[Article by Mikhail Dmitruk: "Surprises of the 'Peaceful Atom': The Insidious Trail of Iodine-131"]

[Text] Many people could be exposed to radiation in regions the IAEA [International Atomic Energy Authority] considers suitable for human habitation. This is the disturbing conclusion of Candidate of Technical

Sciences Boris Karasev, senior scientific associate at the Hydrogeology and Engineering Geology Institute.

Few people know about the independent study conducted by teams of experts from the Sociology Institute of the Russian Academy of Sciences and the U.S. Center for Civic Initiative in Bryansk, Zhitomir, and Gomel oblasts in 1991 and 1992. They found that many people living in these regions displayed signs of acute radiation sickness, which can be caused by doses of 100-400 rad. Some of the victims had died. In others, the sickness had taken chronic forms: Their complaints included asthenia, headaches, xerostomia, enlarged lymph nodes, and tumors of the thyroid gland and other organs. Half of the children in zones of radioactive pollution measuring more than 40 c/km<sup>2</sup> are suffering from these chronic forms of illness.

The independent commission's findings contradicted the IAEA reports that the radioactive pollution in the contaminated regions could not cause any particular damage. Then why did local inhabitants, contrary to the expectations of the nuclear scientists, suffer radiation injuries? The independent experts had no explanation. It was not until two years later than Boris Karasev found the reason.

He went to the regions affected by the Chernobyl disaster each year to study the content and migration of regressive radionuclides. The experimental findings he accumulated are unique: They serve as the basis for fundamentally new theoretical conclusions.

Boris Karasev frequently encountered paradoxical cases: Some of the people in regions where the average level of radiation did not exceed the allowable limit had been exposed to doses of radiation dozens of times as high as the hazard level set by the USSR Ministry of Health. People in these regions sometimes died of radiation sickness....

The researcher's observations were corroborated by the Russian-American commission of independent experts. After comparing its findings to his own, Boris Karasev was able to guess the secret of the radiation injuries these people had suffered.

"According to official data," Boris Viktorovich explained, "the damaged power unit in Chernobyl discharged around 40 percent of the cesium-137 and almost all of the iodine-131 it contained at the time of the accident. These radioisotopes entered the environment in approximately the same quantities, but their effects were incomparable. The fact is that iodine-131 has an extremely short half-life—eight days—and is therefore highly radioactive. It is a thousand times more active than cesium-137, for example, with its half-life of 30 years. Iodine-131 is extremely volatile and can be carried thousands of kilometers in clouds of radioactive dust. It is also highly soluble, and it penetrates soil easily, where it is absorbed by plants and then enters the organism of animals and humans. These properties of iodine are the

reason for the colossal damage it inflicted on the environment in the first days after the Chernobyl disaster.

Radioactive background levels were three or four times as high even in Moscow at the end of April 1986, and in Kiev they were almost 8,000 times as high, reaching 5 milliroentgens per hour.

The population of Novozybkovskiy Rayon in Bryansk Oblast was not advised to use powdered milk and to protect and decontaminate buildings until after May Day. The antitoxin for the radioactive iodine was distributed...three weeks after the accident, when this isotope had already decayed. Many people shared this experience: Almost all of us—from Kiev to Moscow and Minsk—breathed, drank, and ate some iodine-131 in late April and early May 1986. What did this do to us?

Almost all of the iodine entering the human organism is absorbed by the thyroid gland. It takes on most of the brunt of the iodine shock. Whereas the average load on the organism does not exceed the maximum allowable dose of radiation by radioactive iodine—30 rem—the local radiation of the thyroid can be as high as 800 rem. That is why people are suffering from numerous disorders of the thyroid gland—even cancer and the destruction of thyroid tissue—in regions where the IAEA believes that the level of radiation is not dangerous.

The amount of radioactive iodine carried by precipitation differed widely: In some places the content in the soil was dozens of times higher than in surrounding areas. Some types of plants absorbed it more vigorously and were then consumed by humans. Other people ingested iodine-131 in concentrated form—in the milk of cows and goats feeding on radioactive grass.

All of this could have been harmless for people who had drunk potassium iodide: This substance contains non-radioactive iodine, and a thyroid saturated with it will cease to absorb radioactive iodine, which will then quickly be flushed out of the organism. Regrettably, most of the inhabitants of the affected regions learned about this too late.

"But the nuclear scientists," I said to the researcher, "must have known about the horrible implications of the massive accident at the nuclear plant. Why did they not warn the civilian population in time and supply it with the means of preventing radiation sickness?"

"On orders from the government," Boris Karasev replied, "some 'specialists' are still pretending that they know nothing about this danger. They calculate the average maximum allowable doses for polluted territories and seem not to notice the statistical disparities, which can be quite sizable. Their calculations are based on methods military specialists have been using since the early 1960's. For some unknown reason, however, the 'experts' in calculating the maximum dose for civilians have been drawing harmonious isoflux patterns of radionuclide dispersion and migration on their charts, showing that everything is fine on the average, and have

argued that exceptional cases cannot be anticipated. It turns out, however, that they can: Several other researchers and I compiled the logarithmic curves for different isotopes long ago, showing how the population can absorb doses of varying intensity. These curves have extremely long 'tails': This means that some people in territories deemed safe by the IAEA can receive a more than lethal dose. This was corroborated by the independent Russian-American commission in 1991 and 1992."

"Judging by your graphs, however, some people in the polluted territories received doses that were hundreds or even thousands of times as high as the average. Is this really possible?"

"It is, and that is the whole problem. Specialists know that the reactor discharged huge quantities of so-called hot particles at the time of the Chernobyl accident in Chernobyl. At a temperature of 2,000 degrees the radioisotopes were 'fused' together. They formed extremely tiny grains, no larger than a hundredth of a micron, but they were many times more active than the rest of the substance.

"These particles do not dissolve in water. If they get into the lungs, they stay there until they decay. During that time the individual could receive local doses thousands of times as high as the allowable maximum: This individual would be just as sick as someone who received a lethal dose when the atom bomb was dropped.

"Of course, these details spoil the rosy picture the IAEA has painted, but is it not time to remove our rose-colored glasses and face the danger? Accidents at nuclear plants are still occurring, and no one is insured against new Chernobyls.

"It is no secret that small nuclear reactors are operating in Moscow and other big cities. Powerful Mev reactors are operating in many oblasts. Even in the fail-safe mode, some reactors discharge many different radioactive substances through their exhaust pipes. Nuclear power engineers argue that these substances are distributed evenly across a huge territory, but according to logarithmic law there is the possibility of quite sizable disparities. In some types of weather, the smoke from pipes hugs the ground, and the iodine-131, krypton-85, and other radioisotopes in the smoke can be washed away by rain. There is the possibility, therefore, that the content of radioactive isotopes in the air and soil in some places is higher than the danger level—with all of the ensuing consequences.

"If anyone still plans to start up huge new reactors at nuclear power plants," the researcher said in conclusion, "he must consider the serious danger of iodine shock as a result of a disaster, as well as the uneven patterns of radioisotope fall-out in the fail-safe mode. All of the old forecasts, after all, turned out to be inaccurate, to say the least. We need new calculations, based on logarithmic curves. They probably would prove the need for higher expenditures on gas masks, potassium iodide, decontamination agents, and other means of preventing radiation

injuries in the civilian population. Can anyone doubt that these expenditures will be recouped a thousandfold by the preservation of the health of millions of people?"

## BELARUS

**Ecologist Details Work of Research Center**  
*WSI403170094 Minsk DOBRY VECHAR in Russian  
10 Mar 94 p 2*

[Interview with Viktor Rikhardovich Vaaks, director of Belarusian Research Center "Ecology," by nonstaff reporter Mihail Magnitskiy; place and date not given: "Ecology Is the Privilege of the Rich. So, What Should We Do?"—first paragraph is DOBRY VECHAR introduction]

[Text] In May 1991, the Cabinet of Ministers set up the Belarusian Research Center "Ecology" [BelNITS]. BelNITS Director Viktor Rikhardovich Vaaks agreed to meet with our nonstaff reporter Mihail Magnitskiy.

**Magnitskiy:** Viktor Rikhardovich, what are the aims of this new research center? What difficulties have you encountered in your work?

**Vaaks:** At the beginning, BelNITS was a key research center which coordinated the protection of the environment and rational use of our Republic's natural resources. The BelNITS was entrusted with too many duties, which, to my regret, were not adequately supported financially. Our state orders stood at 20 percent of our true work potential. So, we had to rack our brains over our chances to survive in the future. We concluded contracts for conducting research. Some state institutions and associations were unwilling to support us with information on the current state of various environmental sectors. We must analyze it for the State Committee for Ecology [Goskomekologiya]. It was incredible when one state institution received a state grant to collect information on a certain subject and demanded additional payments from another state institution which had to analyze their data. In my mind, this is how people misinterpret market relations.

**Magnitskiy:** As far as I have understood you, the BelNITS was hardly set up when it began to face these difficulties....

**Vaaks:** Yes, you are absolutely correct. We began to learn the art of survival from the very beginning.... More than 160 people—among them some 40 candidates of sciences—are employed with us. Our center is staffed with unique experts in 36 branches of science. They are experts in geography, geology, hydrology, agrochemical science, hydraulic engineering, land surveying, technology, waste processing, energy engineering, sociology, economics, law, and others disciplines. This allows us—contrary to other research institutions—to analyze every facet of an environmental problem. We were the first to draft the Procedures for Comprehensive Territorial

Environmental Protection Programs [TerKSOP] for Rechitsa, Gomel, Zhlobin, Mozyr and their rayons. Besides, we began drafting a similar TerKSOP for Gomel Oblast, and beginning in 1994, we are planning to draft a TerKSOP for Mogilev Oblast. Procedures for drafting these programs have been forwarded to the Goskomekologiya for its approval. This will allow the Republic to have comprehensive environmental protection programs, which could provide a proper basis for analyzing and adopting relevant decisions. These procedures will allow local soviets, the Goskomekologiya, and the government to realize the ecological situation on the territory of the Republic, to have a list of key ecology-oriented measures based not on the departmental approach to the environment but on the analysis of the entire environmental situation. Eventually, this will allow us to properly distribute small financial grants issued by the state for environmental purposes.

**Magnitskiy:** What other research does your center conduct?

**Vaaks:** Goskomekologiya commissioned us to draft expert ecological conclusions, procedures, plans, and programs which could effect the environment. In addition, we draft resolutions on the state of ecological sites; prepare environmental reports on industrial enterprises and waste dumps for state institutions carrying out environmental controls; draft specifications foreseeing ultimate norms for discharging and preserving waste, thermal and electrical energy, and so on. I want to emphasize that in 1993, BelNITS worked on some 50 contracts (in 1992, there were only 14 contracts).

**Magnitskiy:** Viktor Rikhardovich, currently, many people and organizations have begun to deal with the environment. In your opinion, are the qualifications and analyses of experts always adequate?

**Vaaks:** We should hail this tendency. Only man can help nature and himself. In my mind, we have highly qualified experts. However, I believe that we should not only have specialized experts in, for example, soil or water protection. We require both experts with an ecological knowledge in one particular environmental sphere (water, soil, air, biosphere, and etc.) and experts in various spheres of knowledge, who are also competent in the legal field. Beginning in March 1992, we began running nationwide programs to improve environmental qualifications: In 1993, we trained 187 people in eight groups, while in 1994, we are planning to train ten groups of specialists. We rank high in the opinions of our students. In my mind, our environmental experts should also train abroad.

**Magnitskiy:** By the way, do you cooperate with foreign partners?

**Vaaks:** Under the Goskomekologiya umbrella, we participate in international conventions. I could name such

programs as "On Biological Divergency," "On International Trade With Disappearing Wild Fauna and Flora Species," "On Protection of the Ozone Layer," and "Green Lungs of Europe."

The BelNITS has also served as host for international conferences and meetings on various directions in environmental protection, not to mention a Belarusian seminar on water problems.

BelNITS cooperates with firms such as "Volksbildung und Kultur," the "Carl Duisberg Centrum," and "Utecon" from Germany, "Construzioni Dondi" from Italy; we established contacts with "Lahmeyer International," "GKW Consult," and "Alberatungs Gesellschaft" from Germany, "PA Consulting Group" from England, "Viaten Tapiola" and "The Finnish Foreign Trade Association" from Finland, "Cowiconsult" from Denmark, and "OBGRT" from Poland, among others.

We are eager to participate in the International Program for Studying Contamination of the Baltic Sea with superficial and underground water. This work is coordinated by the State Institute for Geology and Vilnius University in Lithuania.

**Magnitskiy:** With which Belarusian organizations and firms do you cooperate?

**Vaaks:** I acknowledge that it is difficult to enumerate all our partners. First of all, we cooperate with academic and research institutions, ecological committees, public organizations, the State Committees for Statistics and Meteorology, and the Defense Ministry. Our center organized such public organizations as International Ecologic Academy, its Belarusian branch and Soligorsk filial, and the Independent Belarusian Ecological Research Association. In addition, we organized comparatively small state ecological organizations BelEKOINFOR, NITS "Energo," "EOS," "SEKOP," "MGEП," and "KBIAS" [expansions unknown]. I will be self critical: We have an enormous amount of environmental information but have not published very much.

**Magnitskiy:** In what direction are you going to work in the immediate future?

**Vaaks:** The Belarusian Cabinet of Ministers deemed BelNITS as the key center in conducting research on the ozone layer, drafting unified procedures for environmental monitoring and surveying of natural resources. In addition, the Belarusian National Center "Infoterra" is operating under our auspices. We will continue to draft not only normative ecological documents—which the nature conservation organizations consistently lack—but also proposals to update waste processing technologies, energy saving measures, and waste utilization.

**Magnitskiy:** In the past, the phrase "If I were a director, I would do this and that" was very popular. I would like to paraphrase this the following way: What would you do in the sphere of ecology if you were a politician?

**Vaaks:** In Belarus, much has been done recently to upgrade our environmental legislation. However, this work should be continued, new legislative acts should be drafted. It should be taken into consideration that Belarus is extremely contaminated with radiation due to the Chernobyl accident; our territory is used to transit international communications; we have an extensive program to eliminate and privatize military sites. In my opinion, an "Ecological Bank" should be set up to ease the drafting and implementation of nature-saving projects....

**Magnitskiy:** Viktor Rikhardovich, I wish success to you and your collective. The "Ecology" center must help resolve the most acute ecological problems in our Republic and its capital.

#### **Waste Burning Facility Said Planned Near Gomel**

*WS1403153494 Minsk DOBRY VECHAR in Russian  
10 Mar 94 p 2*

[Report by RID correspondent Yuriy Leshkevich: "Fire Will Help"]

[Text] As of today, Belarus has only two waste processing factories: in Minsk and Mogilev.

However, their low capacity does not resolve the problem with the utilization of consumer waste which sounds extremely acute in the Republic of late. In Belarus, registered waste sites occupy some 700 hectares of land, while the area occupied by unregistered waste sites is even larger. Therefore, the only option is to build waste burning factories similar to ones which are "at service" in all civilized states.

RID has learned that the construction of such a waste burning factory is being planned close to Gomel. According to experts, total costs of this construction project will stand at around 320 million German marks. The output of this factory will be 500 tonnes of waste per year. According to the plans, this factory will also burn silt which accumulates in our Republic at a rate of close to 1 million tonnes per year.

#### **ESTONIA**

##### **Paldiski Nuclear Waste To Be Removed Using New Russian Containers**

*944K0799E Tallinn RAHVA HAAL in Estonian  
12 Feb 94 p 1*

[Article by Tiit Tambi: "Problems of Nuclear Waste Removal About To Be Solved"]

[Text] A conference of the working group on nuclear and radiation safety in the Baltic Seaboard countries ended in Tallinn yesterday.

At a meeting with journalists following the conference, Antii Vuorinen from Finland said that the radiation

danger still plagues the Baltic Sea region. To reduce that danger, it is necessary that the newly freed Baltic states join with agreements that have previously been concluded with the Soviet Union. These would include agreements on curbing the proliferation of nuclear substances and, in case of danger, making information available promptly. Vuorinen was pleased that the problem of removing nuclear waste from Paldiski is close to being solved.

Foreign ministry advisor Mark Sinisoo elaborated on his remark. Namely, the working group had received new data on several of the problems recently. To remove nuclear waste from Paldiski, Russia wants to use a brand new TK-18 type of container that has never been used for that purpose before. This is why they have to be tested, which is to be done in March. What if Russia's nuclear monitoring agency should declare them unfit?

Russia, at this time, does also not have a policy for storing nuclear waste, and this needs to be coordinated with the government. Besides, this policy supposedly also depends on the availability of money and on Russia's so-called 'global nuclear problems.' By way of consolation: The Paldiski issue will not be coming to a standstill because of these snags.

The working group also discussed Sillamäe and matters related to radioactive beacons. Other news pertaining to the not-so-secret Salaspils reactor in Latvia (a science-oriented facility) revealed that it uses 90-percent enriched uranium. The latter presents quite a hazard.

#### **World Bank Loan for Modernizing Kunda Plant**

94P50102Z Copenhagen BERLINGSKE TIDENDE  
in Danish 1 Mar 94 p 6

[Article by Lise Tajik: "Cement Plant in Estonia Gets Big Environment Loan"]

[Text] The World Bank through its subsidiary, the International Finance Corporation (IFC), has granted over 200 million [Danish] kroner for modernizing and improving the environmental impact of a large cement plant in Estonia, AS Kunda Nordic Cement. The agreement is IFC's largest investment project in the former Soviet Union.

According to a preliminary agreement, around 56 million kroner of this amount will be used for expanding the harbor facilities in Kunda, while 50 million are earmarked for environmental improvements, including stronger filters.

The cement plant, which was built in the 1960's based on East German brown-coal technology, has for years been the area's greatest environmental threat, because the plant each hour unhindered has been spewing out 15 tons of cement dust up through its smokestacks—

corresponding to 10-15 percent of production. Converting this, it means that in 10 years enough cement to build two Great Belt bridges has fallen on the head of inhabitants of Kunda.

The Kunda plant currently is responsible for a third of Estonia's total air pollution, but after modernization is completed, it is expected that this level will drop to 1 or 2 percent. At the same time, production is expected to double to 900,000 tons annually.

The greatest part of production is expected to be earmarked for Western markets.

#### **Recent Laws Revitalize Environmental Protection Fund**

94WN0206A Tallinn ESTONIYA in Russian 2 Feb 94  
p 5

[Article by Leydur Rannamets: "The Mechanism for Protecting the Environment Works"]

[Text] Clean air, water and soil have become luxuries for which we must pay—that is how we may summarize the statements made by the vice-chancellor of the ER [Estonian Republic] Department of the Environment, Eva Kraav, and other specialists at a press conference held on Monday.

The Environmental Protection Fund was created in Estonia already 10 years ago, but only quite recently, after the adoption of laws on the protection of natural resources and on the environmental protection fund, has the money begun to go into the treasury as it should. For the right to use natural resources, our enterprises last year paid out over million kron, and for pollution of the environment—another 19 million kron. The GAO [joint-stock company] "Eesti pylevkivi" paid 8 million kron into the state budget, and half of this sum returned to the budget of Ida-Virusskiy district. The largest polluters of the air basin in the Northwest—the Narva power plants—paid 2 million kron each for their "smoke trains." Yes, the rates of pay for the right to use natural resources and the sums of compensation for pollution of the environment are currently growing, but only within the limits of inflation, emphasized Eva Kraav.

The payment for natural resource utilization comprises 1.5 percent in the price of shale, 0.3 percent in the price of electricity, and 0.1 percent in the price of the others. The World Bank is indignant and is demanding an increase in the stated rate in order to attract more money to the budget. However, Estonia, in the words of Eva Kraav, is resisting this, clearly foreseeing the consequences of this step for the population.

Where is the money of the Environmental Protection Fund going?

Half goes to the central fund, while the other half remains in the districts. The utilization of monies from the central fund is the prerogative of its council, in which

all the districts and cities are also represented. The money goes primarily for the construction of purification structures and for the development of the environmental protection infrastructure. Last year, more was allocated for facilities which were in their stages of completion. Among them were purification structures in Tyuri, Otepya, Tammsalu, Vyaymela, and Vyru, the construction of sewers in Yakhvi, Voka, and others.

That village, city or enterprise which has effective purification structures pays significantly less for pollution of the environment. That is how interest in developing a normally operating purification system is encouraged. After the installations for biological purification of sewage waters were placed into operation in Tallinn in October of last year, the city began to pay significantly less to this fund. Yet Tartu, which sends its sewer water along the Emayga to Lake Chudskoye in an almost unpurified state, must pay a hefty price.

The most unfavorable situation, as before, is in the northwest. It is true that because of the decline in production Narva has begun to consume less water, and the project capacity of the facilities makes it possible now to keep up with the purification of the water which is used. However, problems remain.

In Tallinn the main culprit in pollution of the air basin is auto transport.

Economic mechanisms for protecting the environment have begun to work. We may expect an improvement in the situation, but only if all the money collected for environmental protection purposes is used for its designated purpose, and not "rechanneled" to other needs. Sometimes that happens too.

## TAJIKISTAN

### Greenpeace Wants Tajik-Russian Military Exercises Cancelled

LD1803105894 Moscow 2x2 Television in Russian  
0930 GMT 18 Mar 94

[Text] The Russian section of the Greenpeace international ecological organization is calling for the training [exercise] for Russian and Tajik forces planned for 18-20 March in the Tiger Valley [Tigrovaya Balka] national park to be cancelled. Tanks, artillery, and mass bombing raids are to be used during the exercise, which is intended to develop methods of combatting opposition formations. The Tiger Valley national park in Tajikistan is a unique natural zone protected by law—in the primordial woods here there are about 25 types of animal included in the Red Book [of endangered species].

## URKAIN

### Secret Kravchuk Decree on Nuclear Power Publicized

LD1903182794 Kiev UNIAN in Ukrainian 2030 GMT  
18 Mar 94

[Text] The Green Party of Ukraine and the Ukrainian ecological association "Green World" held a news conference on 18 March dedicated to the issue of the ecologically dangerous enterprises in Kiev. These, in particular, are plants "Radykal" [Radical], "Khimvolokno" [Chemical Fiber], TE-6, as well as automobile transport and the radioactive contamination of the capital as a result of the accident at the Chernobyl nuclear power station.

The news conference was attended by Green Party Chairman Vitaliy Kononov, Yuriy Samoylenko, first deputy chairman of the Ukrainian ecological association "Green World", Serhiy Konyukhov, the chairman of the Ecological Commission of the Ukrainian Republican Party, Mykhaylo Mykhalko, the chairman of the "Save Holosiyevo" Union [woodland on outskirts of Kiev], and others. Anatoliy Panov, the executive director of the newspaper ZELENYY SVIT [GREEN WORLD], expressed his conviction that the "hushing up of the fact that Kiev did suffer as a result of the accident at the Chernobyl nuclear power station is not just a detrimental but a criminal phenomenon. If our state has no money to provide medical treatment to Kievites and improve their health, this money could be provided by the world public."

At the news conference, Greenpeace-Ukraine made public its press release disclosing a secret decree No. 64/94 by Ukraine's president of 23 February 1994 "On urgent measures to develop nuclear power engineering and create a nuclear-fuel cycle in Ukraine." The decree, in particular, envisages the commissioning of four new reactors at the Zaporozhye, Khmelnitskiy, and Rovno nuclear power stations and also the repair and putting into operation of the second power unit at the Chernobyl nuclear power station, which was ruined by fire in October 1991.

### Minister Kostenko Wants Russia To Remove 'Poisonous Heptyl'

AU1603154294 Kiev HOLOS UKRAYINY in Ukrainian  
16 Mar 94 p 2

[Oleksiy Breus report: "The 'Greens' Come in Different Shades"]

[Text] At the end of February, at a news conference held in the building of the ecological association "Green World," Ukraine's Green Party disseminated a statement in support of the decision adopted by the Ukrainian president and Supreme Council on renouncing nuclear weapons and demanded that Minister of Environmental Protection Yuriy Kostenko be dismissed from

his post because he, allegedly, spoke against nuclear disarmament. The first deputy chairman of the "Green World," Yuriy Samoylenko, said on that occasion that the association supported the statement and told HOLOS UKRAYINY about it on 24 February.

However, a few days later, chairman of the "Green World" Mykola Korobko stated that his association did not and does not support anybody's demands for Yu. Kostenko's resignation. As regards Yu. Samoylenko, it appears that the Association's Green Council expressed no-confidence in him as far back as October 1993. However, that move did not receive much publicity.

Another deputy chairman of the "Green World" Anatoliy Zolotukhin reported by telegram from Nikolayev, where he heads the association's oblast organization, about business relations with Yu. Kostenko and changes for the better at the Ministry of Environmental Protection. At the same time, he supported the renunciation of nuclear weapons.

Minister Yu. Kostenko himself further specified that he never was against nuclear disarmament, but that it should not be detrimental to Ukraine. For example, if Russia takes the [nuclear] warheads, it should not leave

behind the poisonous heptyl that is used as fuel for missiles. He also added that, today, concrete ecological deeds on the part of the "Greens" would be more useful than their opportunist political chatter.

#### **Cabinet Decree Regulates Import of Hazardous Waste**

*AU1003182094 Kiev DEMOKRATYCHNA UKRAYINA  
in Ukrainian 3 Mar 94 p 1*

[Unattributed report published under the rubric "Moment": "To Prevent Environmental Pollution"]

[Text] The Cabinet of Ministers has issued a decree on regulating the import into Ukraine and transit across its territory of waste products (secondary raw materials). The decree lists substances and materials, falling into the category of hazardous waste, whose import into Ukraine is banned, and establishes a procedure for issuing licenses for the import into Ukraine or transit across its territory of waste materials (secondary raw materials). It also determines that the import into Ukraine or transit across its territory of waste materials (secondary raw materials) without the permission of the Ministry of Environmental Protection is forbidden.

## REGIONAL AFFAIRS

### European Environment Agency Established, Priorities Noted

BR0903155694 Paris *LES ECHOS* in French 9 Mar 94 p 6

[Philippe Escande report: "Difficult Birth of Environment Agency"]

[Text] Decided in 1989 and then officially created in 1990, the European Environment Agency still does not have its own home. Tossed about by political battles which go way beyond it, this modest institution has so far not had much luck. For three years, France, although it initiated the project, blocked any decision on the agency's headquarters while the future of the European Parliament in Strasbourg was threatened. The affair was settled last year and resulted in the selection of Copenhagen as the final headquarters.

This new Community body, modest in size, corresponds to an extremely ambitious objective: To finally give the European Union the means of pursuing a real environment policy. "In the absence of any reliable statistics, we cannot say anything about the state of the environment and respect for the directives in the different countries of the Union," Ioannis Paleokrassas, current commissioner for the environment in the European Commission, admitted. It is still impossible to compare the quantity of waste consumed, air pollution, or the quality of water between two Union countries. Indeed, Brussels' aim is to have a reliable and indisputable tool which enables it both to prepare future directives on the environment more efficiently and to monitor their effectiveness on the ground.

#### Independence but Modest Budget

"The original idea was also to combat ecological inequalities by preventing the transfer of polluting activities to less demanding countries," Jacques Varet, director of research at the Environment Ministry and first chief of the French Environment Institute (IFEN), explained. The aim now is to gather, check, and process data coming from the whole European Union in order to make them available to Brussels but also to the member states and the public (associations or enterprises).

To carry out its task effectively, the agency will have around 40 people and a budget of around 10 million ECU's [European Currency Units] (ECU 9.5 million this year, almost ECU 13 million when fully operational). These are limited means which force it to work through a network. Correspondents in each country, called "focal points" in Community jargon, will have the task of collecting these data. In Germany, the focal point will simply be the big Federal Environment Agency, whereas France has set up a body especially devoted to this work—the IFEN. It is for the European Agency to harmonize the methods, to compile and interpret the results. In addition, for specific requests, the agency will

use thematic centers (which may or may not be focal points) on specific subjects such as air, water, noise, waste, or land use.

#### Political Role

At first, the agency will mainly work on air and water quality, natural habitats, and waste. These priorities were all defined in the Fifth EU Framework Program. Every three years it will publish a report on the environment, a vast compendium including all the data harmonized at European level. Meanwhile, it will design specific studies, for instance on acid rain, waste transportation, or the greenhouse effect.

The director of the agency should be appointed in April. A work program covering several years will then be drawn up before the summer. Officially, this institution will work completely independently. This is demonstrated by the fact that its 18-member administrative council will comprise in particular two Commission members, two others appointed by the European Parliament, one representative per member state, a representative from Eurostat (the European statistical body), and one from the Joint Research Centers. This independence could ultimately engender tension. Although all states agree on the need to have a data collection tool, many are worried about seeing this institution transformed into a censor with the task of pointing out the good and bad students (which are not necessarily those you would expect...) in the European Union in the sphere of the environment and the implementation of EU directives.

This is a "political" role which it is so far being refused but which Brussels would like to see it playing. If it is simply a question of compiling and harmonizing statistics, was there any need to create a new body when a powerful tool in this sphere already exists with Eurostat? In addition, the web-like organization of the network, with focal points intersected by thematic centers, raises the fear of an escalation of bureaucracy, for which Brussels is already all too often criticized.

The agency, because of this "battle of headquarters," comes rather late, at a time when many of the European directives have already been adopted or are "in the pipeline" and especially at a time when the environment no longer has the same influence as before within the Commission and in the member states. It will therefore quickly have to prove that, despite its late arrival, it is still an observation post which is more vital than ever.

## AUSTRIA

### Klestil Discusses Common Regional Concerns

AU2003203294 Bratislava *PRAVDA* in Slovak 16 Mar 94 pp 1, 13

[Julius Lorincz report on "recent" news conference in Vienna with Austrian President Thomas Klestil: "Our Region Has a Tremendous Future"—first paragraph is editorial introduction]

[Text] Thomas Klestil, President of the Republic of Austria, recently received a group of Slovak reporters—from NARODNA OBRODA, PRACA, SLOVENSKY DENNIK, UJ SZO, SLOBODNY PIATOK weekly, and PRAVDA. The reason for this meeting in his study at the Vienna Hofburg was the upcoming visit by the Slovak president to Austria. Although in the meantime domestic events in Slovakia resulted in a postponement of the visit, the frankness and stimulating nature of the discussion with Klestil undoubtedly warrant our passing on some of the ideas and views of the Austrian president.

In the introduction, he pointed out that Austria has for decades endeavored to remove the Iron Curtain, to create the conditions for good neighborhood despite the diverse ideological views. "Austria was like a window, but the Iron Curtain is gone, and we are very close neighbors capable of extensive cooperation. There are no two capitals as close to one another as Vienna and Bratislava. Moreover, as I study our relations on a daily basis and in the long-time perspective, I believe that this region has a tremendous future. You know that at this time we have problems concerning the transit of automobile transport through Austria, and we are also discussing it with the European Union. We have, however, the great option of transferring the transport not only to the railroad but also to the Danube River. After all, there is the Rhine-Main-Danube Channel, there soon may be also a Danube-Oder channel, and if some facilities are added, Vienna and Bratislava can become important reloading centers. There are great possibilities for an important power center to emerge in our region—oil and gas pipelines from Russia pass through here, and the Adria oil pipeline. I am also thinking of cooperation between Vienna and Bratislava airports, of the entire infrastructure of the two great cities."

In the subsequent part of the discussion, Klestil pointed out that just a "nice picture" of the proximity of Vienna and Bratislava is not enough for Austrian-Slovak relations—the cooperation requires the entire background of the two states and, in this context, he acknowledged that Austria is the "number one" foreigner in founding joint firms and various forms of joint ventures in Slovakia.

A lot of the discussion was dedicated to Central Europe and relations in this part of the continent. According to Klestil, Slovakia, Hungary, the Czech Republic, and Slovenia are interesting neighbors who are undergoing the transition to democratic states with a market economy: "Do you know that in the last few days, we have progressed on the road towards the European Union, and the firmer embedded we are there, the better we will be able to optimize your being our neighbors. We are in a certain sense merging again. No, I do not mean to be nostalgic about history—I am a republican and a democrat—but when I sit here in the room that once belonged to Josef II, and next to it is Maria Theresia's room—it is only natural to perceive the bonds of Central Europe. The unnatural borders have disappeared, actually old possibilities have been revived and new possibilities of cooperation have been created."

The president of the Republic of Austria continued in these reflections when the conversation turned to the meeting in Litomysl [eastern Bohemia] of the presidents of the Central European countries planned for April at the instigation of President Havel: "We should discuss there what Central Europe is, what our cooperation should be like, and political developments in this region. Yes, we should talk about the use of nuclear power, which is a very sensitive and aggravating issue for Austria. We have problems with the Czech Republic because of Temelin [nuclear power plant under construction], we are afraid of Jaslovske Bohunice and Mochovce [Slovak nuclear power plants]. You know, years ago, we decided in Austria—I did not support this view then—not to manufacture nuclear power. It must be understood that we expect Slovakia and other states to respect the population on the other side of the border—a radioactive cloud such as Chernobyl's cannot be stopped by borders. Hence, the dangerous consequences of a conceivable nuclear accident has nothing to do with state sovereignty and borders.

The discussion also touched upon Austrian neutrality and its present meaning. Thomas Klestil said: "When I entered the presidential election campaign, I brought up the question of neutrality for a public discussion. Some of my advisers asked me then with consternation whether I am giving up hope of being elected. I declared, however, that neutrality is not a goal in itself, that it is a matter of security and guarantees. The security issue no longer has just a military dimension, it does not mean only protection against a military threat. In today's world, the threats have changed—there are floods of refugees, migration flows, organized crime, drugs, nuclear accidents, and polluted environment. It was demonstrated that the public is ready for a down-to-earth discussion about these issues and is willing to accept a reasonable explanation. We succeeded in getting Austrians to accept Austria's joining the European Union in accordance with the law on neutrality. It states that we would not join any military grouping or agree to having foreign units enter our territory. So, Austria moves towards the European Union as a neutral state and it does not cause any problems here or in Brussels. I am glad it is so."

Klestil favorably commented on Slovakia joining the Council of Europe, and in this context he spoke also about the problems surrounding the Hungarian ethnic minority, about the anxiety in Slovakia resulting from a statement made once by the deceased Hungarian Prime Minister Jozsef Antall that he regards himself as the "spiritual prime minister of all 15 million Hungarians," i.e., including the more than 5 million Hungarians living abroad. He recommended that a reasonable basis be found for talks on these questions, the mistrust and concerns be gradually vanquished, and said that it would be good to view these issues in a long-term perspective: "If we consider Europe democratic and liberal, borders in their present antiquated form have no meaning." We observed that such a vision is nice and attractive but,

unfortunately, at present we still keep encountering the tendency to close oneself, which has something to do with the advanced and well-to-do Europe apparently is justified in fearing millions of people who "sit on their travel bags" and contemplate whether it would not be best to set off from their country in search of a more stable and better life. The Austrian president responded to this, among other things, with the following:

"The question of mass migration is a significant part of the threat presented by today's world. The prosperous countries of Europe must offer other countries the hope and prospects of a good future so that the local population decides to stay at home. Austria is helping refugees. Those coming from Bosnia-Herzegovina are a real problem for us—there are 74,000 of them in Austria officially. We have no idea how many are there illegally. Just in Vienna, 8,000 children from Bosnia are attending school. What to do about these people? Will they integrate into our society?"

"The West undoubtedly must help more speedily, efficiently, and diversely—the best help seems to be efficient cooperation and investments—to the countries that are passing through a complex transformation process, so that their citizens find meaning for their existence and future."

## FINLAND

### More Effective Environment Regime Seen With EU Membership

94WN0152A Helsinki HELSINGIN SANOMAT  
in Finnish 15 Jan 94 p 8

[Article] *Leena Perttu*: "Report: EU Membership Would Make Environment Protection More Effective; 100 to 300-Meter-Wide Ecological Zone Planned for Coast"]

[Text] If Finland joins the European Union (EU), the effectiveness of protection of the environment would be increased in Finland. In its interim report, the committee that has been investigating the matter concludes that EU directives would require several changes in the laws governing environmental protection.

According to the directives on the environment, an EU country must, among other things, sufficiently increase the number of nature conservation areas through which the preservation of species and the environment are protected. Finland would evidently have to increase the number of conservation areas for some species and types of natural environment. At least the old forests and some environment types in coastal areas would need additional protection.

The protection of certain environment types would be incumbent on Finland since they are not found in the

present EU area. These are the ragged southern and southwestern coastal areas and especially the elevated coast of Pohjanmaa.

Finland would have to present its list of areas to be protected by as early as 5 June 1995.

A member nation may, if it so wishes, protect its environment more rigorously than required by the environment directive.

### Saimaa Ringed Seal Would Benefit

The environment directive prescribes that species populations must be viably preserved and the areas they range in may not be reduced.

For the Saimaa ringed seal, for example, this would mean that the future of the population on the south side of Savonlinna would have to be protected. At the present time there are conservation areas only on the north side—Linnansaari and Kolovesi national parks.

Researchers believe that, if the ringed seal group on the south side of Savonlinna is not protected, the population of 180 Saimaa ringed seals will inevitably decline.

According to the environment directive, places where strictly protected species breed and rest must be protected from changes that weaken the populations of the species. The regulation also applies to activities the side effects of which cause them harm. Because of this, the environmental protection law would have to be amended since it states that species protection may not prevent land from being used for farming or construction.

### Big Dispute Over Coast

The committee also looked into the effects on the laws of the general agreement on biodiversity signed in Rio de Janeiro, but they are largely the same as the changes required by the EU directives.

The Environment Committee of the Baltic Protection Commission, or Helsinki Commission, has drafted a proposal as to how the article governing nature conservation approved in 1992 for inclusion in the Baltic protection agreement is to be applied. The Environment Committee will propose to the Commission, which is to meet next March, that a coastal zone 100 to 300 meters in width from the shoreline into the sea as well as inland be protected outside of populated areas.

The committee will also recommend that a network of protected areas be created in coastal and marine areas. Activities that alter the natural environment or the landscape, such as the construction of buildings and roads, would not as a rule be permitted in the protected 100 to 300-meter coastal zone. Saunas, boathouses, or wind power plants, for example, could be erected in the future as well. A project that is in the public interest could also be permitted if a less sensitive area [to build in] could not be found.

Intensive farming and logging, for example, soil drainage and clear-cutting, would also be restricted in the zone.

Department head Markku Tornberg of the MTK [Agricultural Producers Association] criticized the proposal, maintaining that the establishment of an ecological zone would drive a huge number of Archipelago farms into bankruptcy since their value as security [for loans] would plummet.

Tornberg made a statement on the interim report. In it he, among other things, said that the committee had drawn unfounded or overly far-reaching conclusions.

#### Effect of Saltwater Flow Into Baltic Viewed

94WN0152B Helsinki HELSINGIN SANOMAT  
in Finnish 22 Jan 94 p B 1

[Article by Matti Perttila, Ph.D., head of the Marine Research Institute Chemistry Department; Lauri Niemisto, special investigator of the Marine Research Institute Chemistry Department, and Professor Ake Niemi, head of the Tvarminne zoological research station: "Saltwater Flow Petered Out Prematurely; New Discharge of Oxygenated North Sea Saltwater Would Work Wonders for Baltic"]

[Text] A year ago the Baltic received a sudden flow of saltwater. The general interest in environmental affairs led to a great deal of publicity about the event in all of the countries bordering on the Baltic. In Finland too there was talk of the "mother of all saltwater discharges" and an abundance of stormy years was predicted.

There had, as we know, been saltwater discharges before then too, but only a very few researchers knew about their flow and its consequences: It was only in January 1993 that the first discharge of the information generation entered the Baltic.

This whole natural spectacle is incredibly complex. This is why a saltwater flow does not just like that lead to big harvests of storms, as was the case after some of the earlier ones.

Five hundred cubic kilometers of freshwater annually enters the Baltic catchment area. If salty ocean water from the North Sea did not occasionally get into the Baltic, the latter's salt content would gradually diminish.

Saltwater flows enter it through the Danish straits across a low threshold. Since, because of this, it is North Sea surface water, it is abundantly supplied with oxygen. But since it contains more salt than the water of the Baltic, it is heavier and sinks to the depths of the Baltic.

#### Flows Come at Long Intervals

However, water only flows from the North Sea into the Baltic under certain conditions. The prerequisites for this are that there be an east wind over the straits and that the surface of the Baltic be lower than that of the North Sea.

Flows into and out of the Baltic usually last only a few days and the effect of the flows does not extend over a very long period.

In some years—usually in winter—however, a continuous, incoming flow is produced that lasts for even weeks on end. Then the water coming from the North Sea gets so far into the Baltic that it does not get back into the direction of flow into the North Sea after turning [at the east end of the Baltic].

Such big water flows occur only a few times in a century, but their effects are felt for a long time. The last big discharge was in the winter of 1975-76. Since then, the salt content of the Baltic has been constantly diminishing and that is also why the density of the water has been reduced—the water has "gotten lighter." Because of this, a big ocean water discharge is increasingly more likely.

Oxygen is needed to decompose the plankton. Since the layer of water adjacent to the bottom is not renewed, its oxygen is depleted. However, oxygen is not the only substance that bacteria use to be able to decompose the plankton. The most important of the others is saltwater sulphate, which is transformed into hydrogen sulfide during this decomposition process.

Hydrogen sulfide kills nearly every living thing on the sea floor. Before the arrival of the saltwater flow, the hydrogen sulfide layer extended from the floor of the central basin of the Baltic, that is, from a depth of 250 meters, to a depth of as little as about 130 meters.

#### Hydrogen Sulfide Uses Up Oxygen

Last February the water surged into the Baltic for about three weeks. Danish and Swedish measuring stations estimated that the volume of the incoming flow was about 310 cubic kilometers. This was one of the "big" discharges of our century.

They knew that large amounts of hydrogen sulfide and nutrients had accumulated on the floor of the Baltic. They feared that this old water would be set in motion and rise to the surface in the southern part of the Archipelago Sea and the Gulf of Finland, where it would result in a sharp increase in algae production. Nevertheless, this did not happen that time. What happened?

From the standpoint of the heavy incoming mass of water, the Baltic develops into a series of basins. After the threshold formed by the Danish straits, the water flows into the Arkona area, which forms a shallow, flat basin.

The mixing of the water was so turbulent in the Arkona that it reduced this mother of all discharges to about a third of its original size.

Some of the water continued on its way into the 100-meter-deep Bornholm Basin, which has a volume of 50 cubic kilometers.

From the Bornholm the saltwater flow went on to the central basin of the Baltic, the Gotland Basin. The flow moves slowly: It took from four to six months to cover this 600-km distance.

So, no more than about 100 cubic km of relatively salty and oxygen-rich water was reaching the central basin of the Baltic in the early summer of 1993. In it there was sea water discharged originally from the North Sea into the Baltic and old Baltic water from the depths of the Arkona and Bornholm basins.

There were 10-12 g/m<sup>3</sup> of oxygen in the North Sea surface water, but no more than a third of that oxygen, about 4 g/m<sup>3</sup>, in the water that was entering the central basin. So, 100 cubic kilometers of water brought 400,000 tons of fresh oxygen into the deep water of the central basin of the Baltic.

However, a whole basinful, about 250 cubic kilometers, of old water containing hydrogen sulfide was waiting for the new water. There had been time enough for about 5 g/m<sup>3</sup> on average, or all told over a million tons, of hydrogen sulfide to form.

It takes roughly 2 tons of oxygen to convert 1 ton of hydrogen sulfide into a harmless form. So, even though an abundance of oxygen rolled into the central basin, it could only handle a small portion of the hydrogen sulfide that was in the basin.

#### Thresholds Protect Gulf of Bothnia

This is why they think that, if a new mass of relatively unmixed water rapidly pushes its way into the central basin, it may shove the light water in it, which contains a lot of hydrogen sulfide, toward the Archipelago Sea and the Gulf of Finland.

The Gulf of Bothnia is protected because the underwater thresholds formed by the continuations of the Salpausselka and the shallows on the south side of the Aland Sea keep the water near the northern [arm of the Baltic] from advancing.

Nevertheless, the pressure of the saltwater that entered the Baltic in January 1993 was great enough to push the old water from the central basin to the floor of the Gulf of Finland. This caused a slight drop in sedimentation and oxygen content on the bottom.

As a result, there will obviously be a shortage of oxygen in the deep waters of the Gulf of Finland over the next few years and bottom-dwelling fauna will suffer because of it. As it rises to the surface, this water containing phosphates will probably somewhat increase the growth of plankton, especially offshore of Hanko and on the eastern side of Suursaari.

The production of algae will not, however, accelerate out of the ordinary. The future of the Gulf of Finland will continue to depend on whether we get the abundant nutrient discharges at the eastern end of the Baltic under control.

#### Flows Come in Successive Years

The flow that occurred in January 1993 was already so mixed at the start of its journey that the increase in salinity—and hence density—it caused was not very significant. The water of the Baltic deeps is still "light" and the situation is still favorable for a new flow.

Actually, the situation is an exciting one: The way has been cleared for a new flow and there has not been time for the hydrogen sulfide to form to any extent. The bulk of a new flow will no longer be expended on disposing of the hydrogen sulfide, but it will be enough to renew the bottom-dwelling animal population.

North Sea flows very often come in series, in successive years. The disturbance in the rhythm of the water exchange that has been going on for nearly two decades also illustrates how delicate the oxygen balance in the Baltic is.

If there is a continuation of the 1993 flow in the near future, we may hope that, after this disturbance in its rhythm that has lasted for nearly 20 years now, the water exchange in the Baltic will return to its normal beat.

#### Last Winter's Saltwater Flow Got as Far as Gotland Basin

The Baltic needs the saltwater that comes from the North Sea through the Danish straits. However, this saltwater flow is only rarely strong enough for it to affect the entire Baltic.

Last winter the incoming flow lasted three weeks. The last big discharge prior to that was in the winter of 1975-76. The oxygen of the bottom water layers was exhausted because of the long interval between flows. When the oxygen was lacking, bacteria produced hydrogen sulfide, which kills nearly every form of life, near the sea floor. A year ago there was a layer of hydrogen sulfide in the central basin of the Baltic that extended to a depth of about 130 meters from the bottom.

Last January 310 cubic km of oxygen-rich, North Sea surface water entered the Baltic. Since it was salty, it was heavier than the water of the Baltic, which is why it advanced along the bottom.

The water flowed from the Danish straits into the shallow, flat Arkona Basin. Some of the water drifted back into the Kattegat area and some of it continued on its way into the Bornholm Basin, which has a volume of 50 cubic km. Once that basin was filled, the excess water went on to the Gotland Basin, which received 100 cubic km of fairly salty, oxygenated water. This 100 cubic km of water carried with it 400,000 tons of new oxygen. Lying in wait for it, however, were 250 cubic km of old water containing a million tons of hydrogen sulfide. There was not enough oxygen to dispose of all of the hydrogen sulfide.

The pressure of the saltwater pushed the old water of the Gotland Basin into the Gulf of Finland. The oxygen content on the bottom of the latter dropped.

Over the next few years there will probably be a shortage of oxygen in the deep waters of the Gulf of Finland and bottom-dwelling fauna will suffer because of it. The growth of plankton will probably increase somewhat.

### World War II Chemical Weapons Dumped in Baltic Sea

*LD0803212494 Helsinki Suomen Yleisradio Network in Finnish 1900 GMT 8 Mar 94*

[Text] According to a report received by the Baltic Sea Marine Protection Commission, at least 40,000 tonnes of chemical weapons and ammunition from World War II were dumped into the Baltic Sea. Approximately 13,000 tonnes of this is war chemicals. The dumping continued until the end of 1947. In addition, the former East Germany dumped 200 tonnes of ammunition in the Baltic Sea during the 1950's. The Protection Commission is still awaiting more information from Russia about the destruction of chemical weapons. According to the report, known dumping sites in the Baltic Sea are situated on the southeastern side of Gotland [island off Sweden], on the eastern side of [the Danish island of] Bornholm, and in the Little Belt in the Danish Straits. The report urges the Protection Commission to issue general rules for fishermen in case chemical weapons get entangled in their catching equipment.

### FRANCE

#### Paris To Contribute Fr800 Million To World Environment Fund

*BR1803151694 Paris LES ECHOS in French 18 Mar 94 p 8*

[“Ph.E.” report: “Twelve Billion Francs Allocated to World Environment Fund”]

[Excerpts] Northern and southern countries finally have agreed on the operating procedures of the fund that will finance projects in developing countries aimed at safeguarding biodiversity and at fighting the green house effect.

After 15 months of intensive discussions, the 71 member countries of the World Environment Fund [WEF] (representing 86 percent of the world population) have reached an agreement on its budget, which will amount to \$2 billion over three years, as compared with the \$800 million for the preceding pilot phase, and on its operation, which will be made more democratic. These two decisions were essential for the commitments made during the 1992 Earth Summit in Rio to retain a minimum of credibility. [passage omitted]

France has committed itself to contributing 800 million French francs [Fr], i.e., one-third of the U.S. contribution, and to another Fr400 million for bilateral initiatives which meet the WEF's regulations but which will be managed by the Central Fund for Cooperation. These initiatives especially seek to assist African projects, which for the time being are enjoying little WEF support. [passage omitted]

### GERMANY

#### Research Minister Views Environmental Research

*AU1003160894 Frankfurt/Main FRANKFURTER ALLGEMEINE in German 10 Mar 94 p 17*

[“Stue”-signed report: “Krueger: Environment Research Must Solve Problems”]

[Text] Bonn, 9 March—Government-subsidized environmental research is to be increasingly oriented toward specific problem-solving and applications. This is the central point made in a strategy paper that Research Minister Paul Krueger presented in Bonn. In developing future priorities of environmental research, politicians want to cooperate with science and technology and the users of the research findings. In Krueger's view, activities must be better coordinated to achieve a more user-oriented environmental research. The Christian Democratic Union politician admitted that there are shortcomings in adjusting activities among the ministries, the research establishments, and industry. This is due to the surge in environmental research. Annual government subsidies, excluding environment-oriented energy, transport, and construction research, have been increased from 250 to 720 million German marks since 1982. Of these, 50 percent each are used for projects and as subsidies for research organizations.

Instead of a number of small projects, pilot projects are to be established where various fields of science will deal with model environmental problems. Institutes shall increasingly cooperate with science and producers or users of environmental technologies. Germany is the world leader in environmental research and technology, Krueger said. He mentioned sewage treatment and waste incineration as examples. Over the past few years, 1 million jobs were created in environmental technology-related industries, and 21 percent of world exports came from Germany.

In a new environmental research program for 1995 to 1999, the environment minister wants to set priorities in the fields of water circulation and climate as well as environment-friendly use of land. In addition, solutions are to be found for avoiding problem substances as early as at the research stage and for establishing closed circulations of substances. This way pollution is to be avoided at the source.

**Liability Fund for Hazardous Waste Exports Criticized**

*BR1703145394 Bonn TECHNOLOGIE-NACHRICHTEN MANAGEMENT-INFORMATIONEN in German 12 Feb 94 pp 8*

[Text] The proposed creation of a liability fund for illegal waste transportation to be financed by industry, now being debated in connection with the incorporation of the Basel Convention into German law, has met with considerable criticism among representatives of industry and the waste management sector. The convention contains provisions on the banning, supervision, and monitoring of exports and transportation. An Environment Committee hearing held behind closed doors on 2 February discussed issues relating to the export and disposal of hazardous waste and Federal Government bills on the subject.

Bayer AG and the federal Hazardous Waste Management and German Disposal Industry associations raised constitutional objections to a "consumer-oriented [as published] liability fund at federal level" proposed by the Bundesrat and other bodies. A solidarity fund of this type would only make sense, the Hazardous Waste Management Association claimed, if all the economic sectors involved in export procedures were cited as potential culprits. The best method of avoiding illegal exports remained monitoring by the laender.

The Disposal Industry Association maintained that before founding a "waste recovery solidarity fund," it should first be established whether a liability incumbent in principle on the state could be replaced by a fund financed by industry. According to the Basel Convention and the European regulation on transportation, "subsidiary state liability" applied to illegal exports. Such a fund would be conceivable only in the form of an organization under civil law that all waste transporters could join, like the "Motor Vehicle Accident Compensation Fund." It would have to be possible to sue illegal traders, but the fund should not have to pay for "exports determined at the political level." Bayer considered a fund arrangement "unfair," because legal waste conveyors would be accepting joint liability for illegal waste exporters, and it would contradict the principle embodied in the European waste directive whereby the culprit had to pay.

North Rhine-Westphalia's Environment Ministry and the Greenpeace environmental organization, on the other hand, would welcome a culprit-oriented liability arrangement. The Environment Ministry spoke out in no uncertain terms against costs being borne out of public funds in accordance with the subsidiary principle and in favor of risk distribution with costs shared by the waste management sector. This, it said, seemed reasonable, as it would enhance the waste disposal operators' sense of responsibility. Greenpeace basically welcomed the introduction of a fund, although a solution that obliged each of the 16 federal laender to set up an individual fund and laid responsibility on the land where

the waste came from as unrealistic and unfair. This would place the Hanseatic cities, the laender with a North Sea seaboard, and the eastern federal laender at a distinct disadvantage and overburden them. The organization also pressed for a comprehensive export ban, especially to developing countries.

**New Laender Threatened by Radioactive Uranium Waste**

*AU1503160094 Berlin DIE WELT in German 15 Mar 94 p 2*

[Welt-Nachrichtendienst" report: "Radioactive Uranium Waste Threatens New Laender"]

[Text] Berlin—According to the Ecological Institute in Darmstadt, hundreds of thousands of people in southern Saxony and Thuringia are subjected to dangerous radiation from the waste of GDR uranium mining. A study which was published yesterday shows that more than 1 billion tonnes of radioactively contaminated waste would have to be safely disposed.

The wastes, which contain radium, constantly release radon. This leads to about six deaths from radiation per year just in the east Thuringian area of Ronneburg, radiation biologist Gerhard Schmidt from Darmstadt says. He called on the Federal Government to quickly fulfill its legal duty to dispose of the waste, because otherwise there would be unjustifiable long-term effects.

According to the institute, there have been 5,000 job-related deaths at the Wismut corporation since the beginning of uranium mining in 1945. Over 40 years the Soviet Union gained about 220,000 tonnes of uranium from the ore in the south of the former GDR as basic material for its military and civilian nuclear program. According to estimates by the Darmstadt institute, the defusing of the environmental bomb will cost far more than the so far assumed 15 billion marks.

**NORWAY**

**Effects of Chernobyl 'Well Into Next Century'**

*94P20478Z Oslo AFTENPOSTEN in Norwegian 28 Jan 94 p 2*

[Article by Rolf L. Larsen]

[Excerpts] "The Chernobyl accident has had greater consequences for Norway than first anticipated," Per Strand, a researcher at the National Radiation Protection Board said.

"The effects of the radioactive fallout will last longer, and a larger amount of radioactive substances will be absorbed by vegetation and animals in the vulnerable outlying grazing grounds than we estimated in 1986," the researcher said. [passage omitted]

"The authorities have set an upper limit for the amount of radiation permitted in foodstuffs before they take special measures. Foodstuffs produced in some of the heavily polluted outlying areas will register above the limit well into the next century unless we continue our special countermeasures," Strand said.

#### Information

One of the measures has been to provide information to segments of the population that are subject to serious exposure about how often they can eat reindeer meat, freshwater fish, or game from the affected areas. Another measure has been to give a substance that binds cesium to animals that have grazed in these areas or to put the animals on nonradioactive feed for a while before they are slaughtered.

"The level of radiation, and consequently the health risks, have been significantly reduced because of these measures. For the population as a whole, the risk has been halved. For reindeer-herding Samis in south and central Norway the risk has been reduced to one-tenth. The Chernobyl incident means a very slight increase in cancer risk for the population, but those groups that eat a lot of reindeer meat, freshwater fish, or mushrooms from the areas that experienced great radioactive fallout will have an increased risk of cancer if countermeasures are not taken. This applies above all to Samis that are reindeer herders. With the use of countermeasures it is expected that one in 1,000 in this group will develop cancer. Without countermeasures, the number would be one in 100."

#### 500 Cancer Cases

"It is estimated that about 500 Norwegians will develop cancer in the next 50 years as a result of the radiation from Chernobyl. (Annually 10,000 Norwegians die of cancer stemming from other causes.) We might expect 80-90 cases of genetic damage in Norway. There has not been any increase in reports of fetal damage in Norway, but a small increase in spontaneous abortions was recorded shortly after the accident," Strand said.

### SWEDEN

#### Environmental Board Fears Cutbacks After EU Entry

94P20484A Stockholm DAGENS NYHETER  
in Swedish 27 Feb 94 p 8

[Article by Gosta Karlsson: "Environmental Research in Danger: Contribution to EU May Force Reductions"]

[Text] Swedish environmental research is in danger of large cutbacks as Sweden moves closer to the EU [European Union]. Sweden's contribution to the EU's research program will eat up more than half of the National Environmental Protection Board's appropriation for environmental research here at home.

This is what Erik Fellenius, head of research at the National Environmental Protection Board (SNV), says. He believes that the government should distribute the EU payment to more Swedish authorities and research councils that finance research on the environment.

#### Increased Influence

In 1992, when Rolf Annerberg, the general director of the National Environmental Protection Board, turned his environmental research study in to the government, SNV warned that national environmental research goals could not be achieved within the budget framework that the government set at that time for environmental research.

Two years ago, 20 million from SNV's budget went to the EU research program "Environment." In fiscal year 1995-96, between 70 and 100 million kronor from of SNV's total purse of 155 million will go to research projects decided upon by the EU.

"Even if we get increased influence over the EU's research program, we cannot be sure that Sweden's special research needs will be satisfied. At issue are research on acidification, the salmon disease M74, and other things. The research program that we need to form a basis for arguments in international environmental negotiations is in danger of suffering serious reductions," says Erik Fellenius.

#### Spread the Contribution

He believes the government should distribute the EU contribution to more Swedish financiers, for example the Business and Technical Development Board (Nutek), the Science Research Council, and the Forestry and Agricultural Research Council.

### UNITED KINGDOM

#### Britain To Review How it Disposes of Nuclear Waste

PM1103144294 London THE DAILY TELEGRAPH  
in English 11 Mar 94 p 10

[Charles Clover report: "Nuclear Waste Review Likely To Delay Sell-off"]

[Text] Plans for disposing of nuclear waste, much of it in temporary storage at sites around Britain, are to be reviewed, possibly delaying privatisation of the nuclear power industry.

The plans were strongly criticised by the Government's chief safety adviser last year.

Mr. Michael Heseltine, President of the Board of Trade, who has indicated that he wanted to see privatisation before the next election, has been pressing for what some officials call a "short and dirty" review.

This would focus narrowly on the potential commercial viability of privatised Pressurised Water Reactors and would report by the summer.

But Mr. John Gummer, Environment Secretary, is adamant that the review should cover both long-term liabilities from decommissioning nuclear plants—costing an estimated 20 billion pounds—and plans for disposing of nuclear power waste.

A remit for the waste review, to be carried out by the Department of the Environment, has been long delayed but is now expected within weeks. The review would be expected to take until the end of the year.

Yet some industry observers say Mr. Heseltine must take a decision this summer on the sell-off of Nuclear Electric and Scottish Nuclear if privatisation is to happen before the next election.

It was uncertainty about the scale of long-term liabilities that led to the nuclear industry being dropped from privatisation in 1989.

The waste review is likely to focus on plans of the nuclear waste agency, Nirex, for a 3 billion pound national nuclear waste dump at Sellafield—and how realistic these are. These plans have slipped from around 2003 to after 2010 while waste continues to mount at Magnox power stations.

The review is also likely to look at costs and strategies for decommissioning nuclear power stations, many of them closing in the next 10 years. This alone will cost up to 10 billion pounds. Other liabilities, including disposing of Atomic Energy Authority sites and British Nuclear Fuels, bring the total closer to 20 billion pounds.

Final disposal of waste, which environmentalists say has never been properly planned, is expected to cost more than that but has never been fully costed.

The recent approval given for the British Nuclear Fuels Thorp plant will probably mean that a lot of extra waste is likely to be generated, with nowhere for it to go.

Last autumn Prof. John Horlock, departing chairman of the Advisory Committee on the Safety of Nuclear Installations, criticised the quantities of waste piling up at power stations and nuclear stores. He called on the Government to ensure that the Nirex waste repository proposed for Sellafield came into operation earlier than 2010.

It is not known if the review will cover reprocessing or dry storage. If it were to do so, it would be a new blow to British Nuclear Fuels which has just won a 16-year battle to open its Thorp reprocessing plant: dry storage is seen by many as a cheaper option than reprocessing.

Nuclear analysts reacted without surprise to the news of a nuclear waste review.

Mr. Gordon MacKerron, senior fellow at the Science Policy Research Unit at Sussex University, said: "There is a clear public perception that our nuclear waste disposal policy is in a complete mess."

"Nuclear Electric will want the Government to clear up all the historic liabilities because it is clear that the City does not want to take them on."

A spokesman for Nuclear Electric disputed whether a waste review would mean delay for privatisation.

#### 'Disturbing' Drop in Marine Carbon Dioxide Absorption

PM1003150594 London *THE DAILY TELEGRAPH* in English 10 Mar 94 p 11

[Christine McGourty report: "Sea Fails To Soak Up Greenhouse Gases"]

[Text] An ocean process that absorbs 20 per cent of man-made emissions of carbon dioxide has broken down.

Oceanographers on a three-month expedition to the Greenland Sea have found a significant reduction in "deep convection"—the process by which the greenhouse gas carbon dioxide is transported to the sea bed.

Dr. Peter Wadhams of the Scott Polar Research Institute, leader of the expedition, said yesterday the decline was "disturbing and surprising."

"Convection in the Greenland Sea has virtually stopped in the last decade," he told Oceanology International, a marine science conference in Brighton.

"It is a process that has been going on for several thousand years and when you see it decline sharply over a decade it gets you worried."

The process was "a plughole" for carbon dioxide and its decline could leave more of the gas in the atmosphere, increasing global warming through the greenhouse effect, he said.

It occurs in only four places—the Greenland Sea, the Labrador Sea, the Weddell Sea in Antarctica and in the western Mediterranean.

Dense surface water sinks to the sea bed, taking carbon dioxide with it.

Except in the Mediterranean, the process begins when ice sheets expand in the winter. As ice forms, salt is rejected into the water, making it more dense and forcing it deeper.

On last year's expedition, oceanographers studied the process at the Odden Ice Tongue—an unusual ice sheet about 100 miles long and 50 miles wide in the Greenland Sea.

"Convection there is dependent on ice forming," said Dr. Wadhams. "But in recent years not enough ice has been forming." This itself could be a result of global warming, he added.

Measurements of salinity and temperature taken from the expedition's four research ships showed that convection took place to a depth of only 3,000 feet last year, compared with 6,000 feet five years ago.

Ten years ago convection took place all the way down to the sea bed—12,000 feet.

#### Search on for Chernobyl-Affected Sheep

94WN0197A London *THE DAILY TELEGRAPH*  
in English 14 Feb 94 p 6

[Article by David Brown, agriculture correspondent:  
"Satellite To Track Sheep in Hunt for Radiation"]

[Text] Scientists have harnessed space technology in an attempt to rid sheep in the United Kingdom of radioactive contamination from the Chernobyl disaster.

About 500,000 sheep in Scotland, England, Ireland and Wales are still affected by the fall out from the 1986 explosion.

They plan to fit transmitters to scores of animals so they can be tracked by satellite wherever they are on the remote hills and moors. Each back-pack strapped to the sheep contains a microcomputer, transmitter and receiver.

The packs not only record the sheep's exact position but also every jaw movement. Researchers can tell when the animals are feeding and when they are simply ruminating. The aim is to find the remaining "hot-spots" of radiation.

More than 500 UK farms are still subject to movement restrictions on their flocks almost eight years after the explosion at the Russian plant.

The worst affected area is Wales where about 230,000 sheep on 340 farms are affected by legislation preventing their meat from being sold until they have been checked by government scientists.

Many sheep, even those born long after the Chernobyl disaster, are still eating radiocaesium in vegetation growing on contaminated soil.

Now, after successful trials with a satellite-based Global Positioning System developed for the United States Defence Department, scientists at the Institute of Grassland and Environmental Research at Northwylke, Devon and the Institute of Terrestrial Ecology at Merlewood, Cumbria, are ready to tackle the contaminated farms.

#### Computer Model To Predict Pollution Path

94WN0198A London *THE DAILY TELEGRAPH*  
in English 9 Feb 94 p 16

[Article by Roger Highfield, science editor: "Sellafield: Who Is Hit If the Worst Happens?"]

[Text] It hasn't happened yet. But should an accident occur at Sellafield, the nuclear reprocessing plant in Cumbria, the path of a radioactive cloud across Britain can be plotted instantly.

The hypothetical "footprint" of pollution caused by a leak and borne on prevailing winds can now be predicted using a computer model. And a couple of days can make all the difference between radioactive fall-out spreading over Scandinavia, or falling in Britain's back yard.

A small-scale version can also reveal how the location and height of a smokestack at a chemical plant affects local pollution. "We could predict five days ahead when there will be a problem with a factory," said Robert Chadwick, environmental product manager at the Meteorological Office, which has developed the model.

The Met Office hopes to use the model, which can incorporate weather forecasts, as a tool to predict air quality, such as the risk of ozone or nitrogen dioxide pollution under certain weather conditions.

When the Met Office unveils its new generation of computer models next month, Whitehall, local councils, pressure groups and environmentalists are expected to show interest in the predictions, which can be produced for as little as £250.

The Government will rely on the computer model to highlight areas at risk from acid rain across the globe, and to predict the fall-out in the event of a catastrophic nuclear accident.

The Met Office's Nuclear Accident Response Model has shown, for instance, that the radioactive plume released by a nuclear accident is diluted more during a hot day in summer than a cold night in winter. The distance the plume of radioactivity travels can depend on the presence of a faster, mobile, non-turbulent layer of air above the explosion. At night, the cool still air can make this layer a few metres thick, while it could be as much as a mile on a summer afternoon, enabling the plume to travel a long way.

The model was developed in the wake of the world's worst nuclear accident at Chernobyl, in 1986, when it became clear that there was a need for a way to assess the risks to the public created by an airborne plume of radioactivity. A smattering of dots moving across a computer screen can aid crisis management by showing how radioactivity spreads, or the effect of smoke sent up by a major fire or volcano.

"Just select your accident and we can forecast the effects," said Roy Maryon, one of its developers.

In the case of Chernobyl, it took a few days before the world was aware of the accident. Now "hindcasts" based on weather patterns can track the pollution over five days from the moment of release.

The computer was put through its paces by Noel Nelson and Karl Kitchen, who helped to develop the model. They simulated a nuclear accident at Sellafield—site of the western world's worst leak, in 1957, when it was known as Windscale.

They chose two different days last month to stage a hypothetical nuclear accident, and after the computer had processed the relevant weather data it plotted the gradual spread of radioactive particles across a map. Had the accident occurred on January 15, within three days north-easterly winds would have wasted the pollution by turns across southern Ireland, Wales, the West Midlands, the south coast as far east as Brighton, then Devon, Cornwall and the coasts of northern France.

By January 18, the winds had turned towards the east. "We see a plume passing across the country to the North Sea," Mr. Nelson said. Had this been the date when a

leak began, only the north-east coast of Britain would have received fall-out, while Scandinavia would have felt the effects 48 hours later.

Other computer plots show how radioactivity would have been washed out of the atmosphere by rain, creating distinct areas where fall-out would concentrate. Within 36 hours of the January 15 emission, the worst hotspots would have been in northern France, with most of Wales and the West Midlands almost as badly hit.

Mr. Chadwick said he could have done with such a warning in 1986, when he was rained on as Chernobyl's plume passed overhead.

The Met Office's computer model contains details of nuclear plants across the planet. It is also linked to a national radiation monitoring network, called Rimnet, so that its predictions can be checked and refined. A major European experiment, Etex, will be conducted this year to see how well 20 such computer models predict the movement of an inert tracer gas released from Brittany.

The model is already part of the Department of the Environment's emergency plan for nuclear accidents.

**G-7 Countries Hold Two-Day Meeting on Environment**

*AU1203193294 Paris AFP in English 1825 GMT  
12 Mar 94*

[Text] Florence, Italy, March 12 (AFP)—Prime Minister Carlo Azeglio Ciampi opened an environmental meeting of the seven richest industrialized nations here Saturday [12 March] warning that population growth increasingly threatened the world's ecology.

"When one thinks that one-tenth of the world population, concentrated in the G7 countries, consumes about two-thirds of the available energy, it is easy to imagine what a destructive effect the pressure of a growing population has on the environment and rare resources," Ciampi said.

"If the developing countries go on, in an uncontrolled manner, to achieve the same level of consumption as us, how many other planets will we need in addition to Earth?" he added.

Environment ministers of Britain, Canada, France, Germany, Japan, Italy, and the United States are attending the two-day meeting.

**G-7: Environmental Projects Could Create 2 Million Jobs**

*AU1303155194 Paris AFP in English 1536 GMT  
13 Mar 94*

[Text] Florence, Italy, March 13 (AFP)—Environmental protection schemes could provide jobs for more than two

million people in the recession-hit seven most industrialized countries, their environmental ministers said here Sunday [13 March].

At an informal meeting, held unusually ahead of a summit of the G7 countries scheduled for July, the ministers said they were convinced environmental projects could generate 2.1 million jobs in Britain, Canada, France, Germany, Italy, Japan and the United States.

They agreed that preservation of nature could be financed by "environmental accounting" or better distribution of taxes.

"No one talked about creating new taxes," said Italian Environmental Minister Valdo Spini at the end of the two-day meeting.

French Environment Minister Michel Barnier said Europe must "implement such reforms together," noting that "pollution has no boundaries."

On safety at nuclear plants, particularly in Central and Eastern Europe, the ministers pledged to "promote aid and economic and technological assistance to countries with the biggest problems."

They also discussed the greenhouse effect—or warming up of the earth's climate through pollution—as well as deforestation, desertification and water pollution.

G7 heads of government and state are to meet in July in Naples.

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